US009102623B2

(12) **United States Patent**
Ziemer et al.

(10) **Patent No.: US 9,102,623 B2**
(45) **Date of Patent: Aug. 11, 2015**

(54) **PYRIDINECARBOXAMIDES, USEFUL-PLANT-PROTECTING COMPOSITION COMPRISING THEM AND PROCESSES FOR THEIR PREPARATION AND THEIR USE**

(75) Inventors: **Frank Ziemer**, Kriftel (DE); **Lothar Willms**, Hofheim (DE); **Christopher Rosinger**, Hofheim (DE); **Thomas Auler**, Leichlingen (DE); **Erwin Hacker**, Hochheim (DE); **Udo Bickers**, Wietmarschen (DE)

(73) Assignee: **Bayer Cropscience AG**, Monheim (DE)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 153 days.

(21) Appl. No.: **13/523,794**

(22) Filed: **Jun. 14, 2012**

(65) **Prior Publication Data**

US 2012/0252670 A1 Oct. 4, 2012

Related U.S. Application Data

(63) Continuation of application No. 12/111,419, filed on Apr. 29, 2008.

(30) **Foreign Application Priority Data**

Apr. 30, 2007 (EP) 07400013

(51) **Int. Cl.**

A01N 25/32	(2006.01)
C07D 211/76	(2006.01)
C07D 213/82	(2006.01)
C07D 401/06	(2006.01)
C07D 413/06	(2006.01)
C07D 417/06	(2006.01)

(52) **U.S. Cl.**

CPC ***C07D 211/76*** (2013.01); ***A01N 25/32*** (2013.01); ***C07D 213/82*** (2013.01); ***C07D 401/06*** (2013.01); ***C07D 413/06*** (2013.01); ***C07D 417/06*** (2013.01)

(58) **Field of Classification Search**

None

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,965,266	A	10/1990	Uno et al.	
5,235,060	A	8/1993	Bullock et al.	
5,344,813	A *	9/1994	Theobald et al.	504/244
5,393,734	A	2/1995	Andrea et al.	
6,794,397	B2	9/2004	Cai et al.	
7,732,375	B2	6/2010	Dunkel et al.	
8,138,118	B2	3/2012	Bickers et al.	
2002/0177578	A1	11/2002	Ricks et al.	
2004/0116479	A1	6/2004	Haviv et al.	
2004/0224844	A1	11/2004	Bickers et al.	
2005/0037922	A1	2/2005	Bickers et al.	
2005/0256000	A1	11/2005	Schaper et al.	
2007/0037858	A1	2/2007	Dunkel et al.	
2007/0196406	A1	8/2007	Dunkel et al.	
2007/0265164	A1	11/2007	Bartsch et al.	

FOREIGN PATENT DOCUMENTS

EP	0298134	1/1989
EP	502740	9/1992
EP	0544151	11/1992
EP	0522392	1/1993
GB	2305174	4/1997
WO	WO 01/14339	3/2001
WO	WO 01/55115	8/2001
WO	WO 2004/084631	10/2004
WO	WO 2005/015994	2/2005
WO	WO 2005/042492	5/2005
WO	WO 2005/042493	5/2005
WO	WO 2005/112630	12/2005
WO	WO 2006/007981	1/2006
WO	WO 2007/041052	4/2007

OTHER PUBLICATIONS

R. Lang & P. Wenk, "Synthesis of Selectivity Trifluoromethylated Pyridine Derivatives as Potential Antihypersensitives". *Ilelvetica Chimica Acta*, vol. 71, p. 596-601, (1988).

M. Gorbunova, I. Genus & V. Kukhar, "Synthesis and Properties of β-Ethoxyvinyl Polyfluoroalkyl Ketones", *Synthesis 2000*, vol. 5, p. 738-742, (2000).

P. Hapiot & Médebielle, "Electrochemically induces free-radical tandem cyclisation of chlorodifluoromethylaled ketones Application to the synthesis of gem-difluorinated heterocycles". Journal of Fluorine Chemistry, vol. 107, p. 285-300, (2001).

H.V. Dias & H. Kim, "Novel Tris(pyrazolyl)borates Bearing Perfluoroalkyl Pigtails. Syntheses and Characterization of the Sodium and Copper(I) Complexes of $[HB(3\text{-}(R)Pz)_3]$ ($R=C_2F_5$, C_3F_7, Pz=Pyrazolyl)". *Organometallics*, vol. 15, p. 5374-5379, (1996).

* cited by examiner

Primary Examiner — Sue Liu

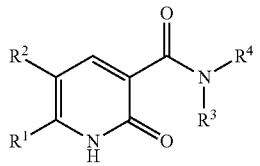
Assistant Examiner — Thor Nielsen

(74) *Attorney, Agent, or Firm* — Frommer Lawrence & Haug

(57) **ABSTRACT**

Compounds of the formula (I), or salts thereof,

(I)



in which R^1 to R^4 are as defined in formula (I) of claim **1** are suitable as useful-plant-protecting agents for reducing or preventing harmful effects of agrochemicals on the useful plants and their method of preparation are described.

17 Claims, No Drawings

PYRIDINECARBOXAMIDES, USEFUL-PLANT-PROTECTING COMPOSITION COMPRISING THEM AND PROCESSES FOR THEIR PREPARATION AND THEIR USE

INCORPORATION BY REFERENCE

The present application is a continuation of U.S. patent application Ser. No. 12/111,419 filed Apr. 29, 2008, which claims benefit under 35 U.S.C. 119(a) of European patent application 07400013.4, filed on Apr. 30, 2007.

Any foregoing applications, including U.S. patent application Ser. No. 12/111,419 and European patent application EP 07400013.4, and all documents cited therein or during their prosecution ("application cited documents") and all documents cited or referenced in the application cited documents, and all documents cited or referenced herein ("herein cited documents"), and all documents cited or referenced in herein cited documents, together with any manufacturer's instructions, descriptions, product specifications, and product sheets for any products mentioned herein or in any document incorporated by reference herein, are hereby incorporated herein by reference, and may be employed in the practice of the invention.

DESCRIPTION

The present invention relates to useful-plant-protecting compounds and compositions comprising specific compounds as safeners for reducing phytotoxic actions of agrochemicals, in particular of herbicides. The invention relates in particular to pyridone derivatives as safeners and to processes for their preparation.

When controlling unwanted organisms in crops of plants which are useful for agriculture or forestry by using pesticides, the useful plants are frequently also damaged to a greater or lesser extent, by the pesticides employed. This unwanted phytotoxic effect is encountered in particular with the use of a considerable number of herbicides in crops of useful plants such as, for example, corn, rice or cereals- and there primarily in the post-emergence application. In some instances, the useful plants can be protected against the phytotoxic properties of the pesticides by employing safeners or antidotes, without diminishing or substantially impairing the pesticidal activity against the harmful organisms. In some cases, even an improved pesticidal action against harmful organisms such as weeds was observed.

The compounds hitherto known as safeners belong to a large number of different chemical structure classes, their suitability as safeners generally also depending on the chemical structures of the pesticides and on the crops of useful plants.

Known for a long time have been the safener actions of compounds from the group of the phenoxy- or heteroaryloxyalkanecarboxylic acids, provided these compounds are applied in combination with herbicides. Examples of such compounds are MCPA and similar compounds which are at the same time herbicidally active against harmful plants, or cloquintocet-mexyl.

Known are furthermore safeners from the group of the derivatives of N-phenyl-substituted heteroaromatic carboxylic esters having a plurality of heteroatoms in the heterocycle. Examples of such safeners are the safeners mefenpyr-diethyl and isoxadifen-ethyl, which are used in commercial products.

WO 2004/084631 (us 2004-0224844) discloses the use of hydroxyl-substituted aromatic carboxylic acid derivatives.

WO 2005/015994 (US 2005-037922) describes specific derivatives of salicylic acid as safeners. These compounds are suitable in particular for use as safeners in crops of corn and soybeans.

Furthermore, WO 2005/112630 (US 2005-256000) discloses 1,2-dihydroquinoxalin-2-one derivatives as safeners.

Active compounds from the chemical class of the pyridones with pesticidal properties are known from the literature. Various biological actions are described; thus, for example, WO 2001/014339 (US 2002-177578) describes the fungicidal action of certain substituted pyridonecarboxamides, WO 2005/042492 (US 2007-196406) and WO 2005/042493 (US 2007-037858) describe inter alia the fungicidal action of heterocyclylcarboxanilides. EP-A-544151 (U.S. Pat. No. 5,344,813) describes the action of hydroxyl-substituted pyridonecarboxamides as herbicides.

Also known are representatives having pharmacological properties. Thus, WO 2001/055115 (U.S. Pat. No. 6,794,397) describes nicotinanilides as inductors of apoptosis, and US 2004/0116479 describes dialkylnicotinamides as inhibitors of angiogenesis.

Furthermore, EP-A-522392 (U.S. Pat. No. 5,235,060) describes 6-trifluoromethyl-substituted pyridonecarboxamides as precursors for the synthesis of herbicidally active sulfonylureas. Helv. Chim. Acta 71 (1988) 596-601 and GB 2305174 mention 1,2-dihydro-2-oxo-6-trifluoromethylpyridine-3-carboxamide, 6-chloro(difluoro)methyl-1,2-dihydro-2-oxopyridine-3-carboxamide and 6-difluoromethyl-1,2-dihydro-2-oxopyridine-3-carboxamide as intermediates in the synthesis of pyranopyridines. WO 2007/041052 mentions 1,2-dihydro-2-oxo-6-trifluoromethylpyridine-3-carboxamide as an intermediate in the synthesis of pharmacologically active spiropiperidines.

The use of such compounds as safeners in combination with certain pesticides has hitherto not been disclosed.

WO 2006/007981 (US 2007-265164) describes a method for identifying compounds which induce the defense of plants against pathogens, where the increase of the expression of plant-endogenous genes is considered to be an indication for the induction.

Here, 1,2-dihydro-2-oxo-6-trifluoromethylpyridine-3-carboxamide is mentioned as part of a group of six compounds which may be referred to as safeners. A safener action confirmed by biological tests on plants has hitherto not been disclosed for this compound, and is also not sufficiently disclosed by WO 2006/007981.

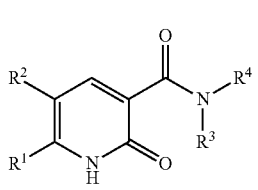
In particular the expression values obtained according to WO 2006/007981 for the compound, which in some cases are at a considerably lower level than those for commercially available safeners also mentioned, lead it to be expected in the best case that, as safeners, they are considerably less suitable, if at all.

When safeners were used to protect useful plants against damage by pesticides, it was found that the known safeners may in many cases have disadvantages. These include:

- the safener reduces the efficacy of the pesticides, in particular that of herbicides, against the harmful plants,
- the useful-plant-protecting properties are insufficient,
- in combination with a certain herbicide, the spectrum of the useful plants in which the safener/herbicide is to be employed is not sufficiently wide,
- a certain safener can only be combined with a small number of herbicides,
- by using safeners, the application rate to be applied and the amount of formulation is increased, which may cause problems during the application.

For the reasons mentioned, there is a need to provide alternative compounds having safener action.

The invention provides the use of compounds of the formula (I) or salts thereof



(I)

in which

R^1 is a $(C_1$-$C_6)$-haloalkyl radical, preferably a radical of the formula CF_3, CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CFClCF_3$, $CFHCF_3$, $CF(CF_3)_2$, $CH(CF_3)_2$, $CF_2CF_2CF_3$, or $C(CH_3)_2F$ and

R^2 is hydrogen or halogen and

R^3 is hydrogen, $(C_1$-$C_{16})$-alkyl, $(C_2$-C_{16}-alkenyl or $(C_2$-$C_{16})$-alkynyl,

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, di[$(C_1$-$C_4)$-alkyl]amino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, [$(C_1$-$C_4)$-haloalkoxy]-carbonyl, $(C_3$-$C_6)$-cycloalkyl, which is unsubstituted or substituted, phenyl, which is unsubstituted or substituted, and heterocyclyl, which is unsubstituted or substituted,

or $(C_3$-$C_6)$-cycloalkyl, $(C_4$-$C_6)$-cycloalkenyl, $(C_3$-$C_6)$-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring, or $(C_4$-$C_6)$-cycloalkenyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring,

where each of the 4 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, di[$(C_1$-$C_4)$-alkyl]amino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, [$(C_1$-$C_4)$-haloalkoxy]-carbonyl, $(C_3$-$C_6)$-cycloalkyl, which is unsubstituted or substituted, phenyl, which is unsubstituted or substituted, and heterocyclyl, which is unsubstituted or substituted,

and

R^4 is $(C_1$-$C_{16})$-alkyl, $(C_2$-$C_{16})$-alkenyl or $(C_2$-$C_{16})$-alkynyl,

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, di[$(C_1$-$C_4)$-alkyl]-amino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, [$(C_1$-$C_4)$-haloalkoxy]-carbonyl, $(C_3$-$C_6)$-cycloalkyl, which is unsubstituted or substituted, phenyl, which is unsubstituted or substituted, and heterocyclyl, which is unsubstituted or substituted

or $(C_3$-$C_6)$-cycloalkyl, $(C_4$-$C_6)$-cycloalkenyl, $(C_3$-C_6-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring, or $(C_4$-$C_6)$-cycloalkenyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring,

where each of the 4 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, [$(C_1$-$C_4)$-haloalkoxy]-carbonyl, $(C_3$-$C_6)$-cycloalkyl, which is unsubstituted or substituted, phenyl, which is unsubstituted or substituted, and heterocyclyl, which is unsubstituted or substituted,

or

R^3 is $(C_1$-$C_4)$-alkoxy, $(C_2$-$C_4)$-alkenyloxy, $(C_2$-$C_6)$-alkynyloxy or $(C_2$-$C_4)$-haloalkoxy and

R^4 is hydrogen or $(C_1$-$C_4)$-alkyl or

R^3 and R^4 together with the directly attached nitrogen atom are a four- to eight-membered heterocyclic ring which, in addition to the nitrogen atom, may also comprise further hetero ring atoms, preferably up to two further hetero ring atoms selected from the group consisting of N, O and S, and which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, cyano, nitro, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy and $(C_1$-$C_4)$-alkylthio, or

R^3 and R^4 together with the directly attached nitrogen atom are the group —N═CR^5—NR^6R^7, in which

R^5 is hydrogen or $(C_1$-$C_6)$-alkyl, with hydrogen being preferred, and

R^6, R^7 independently of one another are hydrogen or $(C_1$-$C_4)$-alkyl, preferably $(C_1$-$C_2)$-alkyl, or R^6 and R^7 together with the directly attached nitrogen atom form a five- to seven-membered, preferably saturated heterocyclic ring, such as, for example, piperidinyl, pyrrolidinyl or morpholinyl,

or

R^1 is a $(C_1$-$C_6)$-haloalkyl radical, preferably a radical of the formula CF_3, CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CFClCF_3$, $CFHCF_3$, $CF(CF_3)_2$, $CH(CF_3)_2$, $CF_2CF_2CF_3$ or $C(CH_3)_2F$, more preferably a radical of the formula CF_3, CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CF_2CF_2CF_3$ or $C(CH_3)_2F$, in particular CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CF_2CF_2CF_3$ or $C(CH_3)_2F$, even more preferably CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl or $CF_2CF_2CF_3$,

R^2 is halogen,

R^3 is hydrogen and

R^4 is hydrogen

or

R^1 is a radical of the formula CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CFClCF_3$, $CFHCF_3$, $CF(CF_3)_2$, $CH(CF_3)_2$, $CF_2CF_2CF_3$ or $C(CH_3)_2F$, more preferably CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CF_2CF_2CF_3$ or $C(CH_3)_2F$, even more preferably CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl or $CF_2CF_2CF_3$,

R^2 is hydrogen,

R^3 is hydrogen and

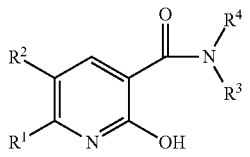
R^4 is hydrogen,

as a useful-plant-protecting agent for reducing or preventing harmful actions of agrochemicals, preferably pesticides, in particular herbicides, on the useful plants.

Hereinbelow, the compounds of the formula (I) and their salts are in some cases also referred to as "compounds (I)" according to the invention or used according to the invention.

The compounds of the formula (I) also include tautomers which can be formed by hydrogen shifts and whose structure is formally not embraced by the formula (I). These tautomers are nevertheless included in the definition of the compounds of the formula (I) according to the invention. The definition of

the compounds of the formula (I) includes in particular the tautomeric structures of the formula (Ia) (2-hydroxypyridine-3-carboxamides) or salts thereof



(Ia)

in which

R^1, R^2, R^3 and R^4 are as defined in formula (I).

Some compounds of the formula (I) according to the invention or salts thereof are novel and also form part of the subject matter of the invention.

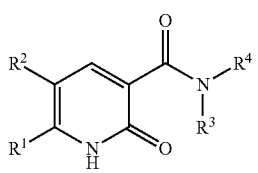
It is noted that in this disclosure and particularly in the claims and/or paragraphs, terms such as "comprises", "comprised", "comprising" and the like can have the meaning attributed to it in U.S. patent law, e.g., they can mean "includes", "included", "including", and the like; and that terms such as "consisting essentially of" and "consists essentially of" have the meaning ascribed to them in U.S. patent law, e.g., they allow for elements not explicitly recited, but exclude elements that are found in the prior art or that affect a basic or novel characteristic of the invention.

It is further noted that the invention does not intend to encompass within the scope of the invention any previously disclosed product, process of making the product or method of using the product, which meets the written description and enablement requirements of the USPTO (35 U.S.C. 112, first paragraph) or the EPO (Article 83 of the EPC), such that applicant(s) reserve the right and hereby disclose a disclaimer of any previously described product, method of making the product or process of using the product.

The invention also provides useful-plant-protecting compositions comprising compounds of the formula (I) or salts thereof and formulation auxiliaries. The invention also provides useful-plant-protecting compositions comprising compounds of the formula (I) or salts thereof in combination with further agrochemicals, preferably pesticides, in particular herbicides, and, if appropriate, formulation auxiliaries.

Some compounds of the formula (I) are already described as intermediates for preparing active compounds, see the abovementioned GB-A-2305174 (comp. (I) in which R^1=CF_3, CF_2Cl or CF_2H and R^3=R^4=H). EP-A-522392, which has already been mentioned, described in a general manner inter alia compounds (I) as intermediates for preparing sulfonylureas. The safener actions of the compounds have not been described.

The invention also provides compounds of the formula (I) or salts thereof



(I)

in which

R^1 is a (C_1-C_6)-haloalkyl radical, preferably a radical of the formula CF_3, CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CFClCF_3$, $CFHCF_3$, $CF(CF_3)_2$, $CH(CF_3)_2$, $CF_2CF_2CF_3$ or $C(CH_3)_2F$, in particular a radical of the formula CF_3, CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CF_2CF_2CF_3$ or $C(CH_3)_2F$, more preferably CF_3, CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl or $CF_2CF_2CF_3$ and

R^2 is hydrogen or halogen and

R^3 is hydrogen, (C_1-C_{16})-alkyl, (C_2-C_{16})-alkenyl or (C_2-C_{16})-alkynyl,

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio, (C_1-C_4)-alkylamino, di[(C_1-C_4)-alkyl]-amino, [(C_1-C_4)-alkoxy]-carbonyl, and [(C_1-C_4)-haloalkoxy]-carbonyl,

or (C_3-C_6)-cycloalkyl, (C_4-C_6)-cycloalkenyl, (C_3-C_6)-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring, or (C_4-C_6)-cycloalkenyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring,

where each of the 4 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio, (C_1-C_4)-alkylamino, di[(C_1-C_4)-alkyl]-amino, [(C_1-C_4)-alkoxy]-carbonyl, [(C_1-C_4)-haloalkoxy]-carbonyl, (C_3-C_6)-cycloalkyl, which is unsubstituted or substituted, phenyl, which is unsubstituted or substituted, and heterocyclyl, which is unsubstituted or substituted,

and

R^4 is (C_1-C_{16})-alkyl, (C_2-C_{26})-alkenyl or (C_2-C_{16})-alkynyl,

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio, (C_1-C_4)-alkylamino, di[(C_1-C_4)-alkyl]-amino, [(C_1-C_4)-alkoxy]-carbonyl, and [(C_1-C_4)-haloalkoxy]-carbonyl,

or (C_3-C_6)-cycloalkyl, (C_4-C_6)-cycloalkenyl, (C_3-C_6)-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring, or (C_4-C_6)-cycloalkenyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring,

where each of the 4 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio, (C_1-C_4)-alkylamino, [(C_1-C_4)-alkoxy]-carbonyl, [(C_1-C_4)-haloalkoxy]-carbonyl, (C_3-C_6)-cycloalkyl, which is unsubstituted or substituted, phenyl, which is unsubstituted or substituted, and heterocyclyl, which is unsubstituted or substituted,

or

R^3 is (C_1-C_4)-alkoxy, (C_2-C_4)-alkenyloxy, (C_2-C_6)-alkynyloxy or (C_2-C_4)-haloalkoxy and

R^4 is hydrogen or (C_1-C_4)-alkyl or

R^3 and R^4 together with the directly attached nitrogen atom are a four- to eight-membered heterocyclic ring which, in addition to the nitrogen atom, may also comprise further hetero ring atoms, preferably up to two further hetero ring atoms selected from the group consisting of N, O and S, and which is unsubstituted or substituted by one or more

radicals selected from the group consisting of halogen, cyano, nitro, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy and $(C_1$-$C_4)$-alkylthio, or

R^3 and R^4 together with the directly attached nitrogen atom are the group —N═CR^5—NR^{6}R^7 in which

R^5 is hydrogen or $(C_1$-$C_6)$-alkyl, with hydrogen being preferred, and

R^6, R^7 independently of one another are hydrogen or $(C_1$-$C_4)$-alkyl, preferably $(C_1$-$C_2)$-alkyl, or R^6 and R^7 together with the directly attached nitrogen atom form a five- to seven-membered, preferably saturated heterocyclic ring, such as, for example, piperidinyl, pyrrolidinyl or morpholinyl,

or

R^1 is a $(C_1$-$C_6)$-haloalkyl radical, preferably a radical of the formula CF_3, CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CFClCF_3$, $CFHCF_3$, $CF(CF_3)_2$, $CH(CF_3)_2$, $CF_2CF_2CF_3$ or $C(CH_3)_2F$, more preferably CF_3, CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CF_2CF_2CF_3$ or $C(CH_3)_2F$, in particular CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CF_2CF_2CF_3$ or $C(CH_3)_2F$, even more preferably CF_2Cl, CF_2CF_3, CF_2CF_2Cl or $CF_2CF_2CF_3$,

R^2 is halogen,

R^3 is hydrogen and

R^4 is hydrogen

or

R^1 is a radical of the formula CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CFClCF_3$, $CFHCF_3$, $CF(CF_3)_2$, $CH(CF_3)_2$, $CF_2CF_2CF_3$ or $C(CH_3)_2F$, preferably CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CFClCF_3$, $CF_2CF_2CF_3$ or $C(CH_3)_2F$, in particular CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CFClCF_3$ or $CF_2CF_2CF_3$, even more preferably CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl or $CF_2CF_2CF_3$,

R^2 is hydrogen,

R^3 is hydrogen and

R^4 is hydrogen.

Preferably excluded are compounds of the formula (I) and salts thereof in which

R^1 is $(C_1$-$C_3)$-alkyl which is substituted by one to three fluorine atoms,

R^2 is hydrogen,

R^3 is $(C_1$-$C_2)$-alkyl and

R^4 is $(C_1$-$C_2)$-alkyl.

The lastmentioned preferably excluded compounds are described in a general manner in the abovementioned EP-A-0522392 as intermediates for preparing sulfonylureas.

Depending on the nature and the attachment of the substituents, the compounds of the formula (I) may be present as stereoisomers. All possible stereoisomers defined by their specific spatial form, such as enantiomers, diastereomers, Z- and E-isomers, are embraced by the formula (I).

If, for example, one or more alkenyl groups are present, it is possible for diastereomers (Z- and E-isomers) to occur. If, for example, one or more asymmetric carbon atoms are present, it is possible for enantiomers and diastereomers to occur. Stereoisomers can be obtained by customary separation methods, for example by chromatographic separation procedures, from the mixtures obtained in the preparation. It is also possible to selectively prepare stereoisomers by employing stereoselective reactions using optically active starting materials and/or auxiliaries. Thus, the invention also relates to all stereoisomers embraced by the formula (I) but not shown in their specific stereoform and mixtures thereof.

The possibilities of combining the various substituents of the formula (I) are to be understood in such a way that the general principles of the synthesis of chemical compounds are to be observed, i.e. the formula (I) does not embrace compounds which the skilled worker knows to be chemically impossible.

The terms used above and further below are familiar to the person skilled in the art and have in particular the meanings illustrated below:

The term "$(C_1$-$C_4)$-alkyl" is a short notation for open-chain alkyl having 1 to 4 carbon atoms corresponding to the stated range of carbon atoms, i.e. it includes the radicals methyl, ethyl, 1-propyl, 2-propyl, 1-butyl, 2-butyl, 2-methylpropyl and tert-butyl. Correspondingly, general alkyl radicals having a wider stated range of carbon atoms, for example "$(C_1$-$C_6)$-alkyl", also include straight-chain or branched alkyl radicals having a larger number of carbon atoms, i.e. in the example also the alkyl radicals having 5 and 6 carbon atoms.

Unless specifically indicated, the lower carbon skeletons, for example those having 1 to 6 carbon atoms or, in the case of unsaturated groups, having 2 to 6 carbon atoms, are preferred for the hydrocarbon radicals such as alkyl, alkenyl and alkynyl radicals, including in composite radicals. Alkyl radicals, including in the composite meanings, such as alkoxy, haloalkyl, etc., are, for example, methyl, ethyl, n- or isopropyl, n-, iso, t- or 2-butyl, pentyls, hexyls, such as n-hexyl, isohexyl and 1,3-dimethylbutyl, heptyls, such as n-heptyl, 1-methylhexyl and 1,4-dimethylpentyl; alkenyl and alkynyl radicals have the meanings of the possible unsaturated radicals which correspond to the alkyl radicals; alkenyl is, for example, vinyl, allyl, 1-methyl-2-propenyl, 2-methyl-2-propenyl, 2-butenyl, pentenyl, 2-methylpentenyl or hexenyl, preferably allyl, 1-methylprop-2-en-1-yl, 2-methylprop-2-en-1-yl, but-2-en-1-yl, but-3-en-1-yl, 1-methylbut-3-en-1-yl or 1-methylbut-2-en-1-yl. $(C_2$-$C_6)$-alkynyl is, for example, ethynyl, propargyl, 1-methyl-2-propynyl, 2-methyl-2-propynyl, 2-butynyl, 2-pentynyl or 2-hexynyl, preferably propargyl, but-2-yn-1-yl, but-3-yn-1-yl or 1-methylbut-3-yn-1-yl.

Alkylidene, including, for example, in the form $(C_1$-$C_{10})$-alkylidene, is the radical of a straight-chain or branched alkane which is attached via a double bond, where the position of the point of attachment has not yet been fixed. The only possible positions in the case of a branched alkane are, of course, positions in which two hydrogen atoms may be replaced by the double bond; radicals are, for example, ═CH_2, ═CH—CH_3, ═$C(CH_3)$—CH_3, ═$C(CH_3)$—C_2H_5 or ═$C(C_2H_5)$—C_2H_5.

Cycloalkyl is a carbocyclic saturated ring system having preferably 3-8 carbon atoms, for example cyclopropyl, cyclobutyl, cyclopentyl or cyclohexyl. Substituted cycloalkyl embraces cyclic systems having substituents, substituents having a double bond at the cycloalkyl radical, for example an alkylidene group, such as methylidene, also being included. Substituted cycloalkyl also embraces polycyclic aliphatic systems, such as, for example, bicyclo[1.1.0]butan-1-yl, bicyclo[1.1.0]butan-2-yl, bicyclo[2.1.0]-pentan-1-yl, bicyclo[2.1.0]pentan-2-yl, bicyclo[2.1.0]pentan-5-yl, adamantan-1-yl and adamantan-2-yl.

Cycloalkenyl is a carbocyclic, non-aromatic, partially unsaturated ring system having preferably 4-8 carbon atoms, for example 1-cyclobutenyl, 2-cyclobutenyl, 1-cyclopentenyl, 2-cyclopentenyl, 3-cyclopentenyl, or 1-cyclohexenyl, 2-cyclohexenyl, 3-cyclohexenyl, 1,3-cyclohexadienyl or 1,4-cyclohexadienyl. The explanations given for substituted cycloalkyl apply correspondingly to substituted cycloalkenyl.

The term "halogen" denotes, for example, fluorine, chlorine, bromine or iodine. Haloalkyl, haloalkenyl and haloalkynyl are alkyl, alkenyl and alkynyl, respectively, which are partially or fully substituted by identical or different halogen

atoms, preferably from the group consisting of fluorine, chlorine and bromine, in particular from the group consisting of fluorine and chlorine, for example monohaloalkyl, such as CH_2CH_2Cl, CH_2CH_2F, CH_2ClCH_3, CH_2FCH_3, CH_2Cl, CH_2F; perhaloalkyl such as CCl_3 or CF_3 or CF_3CF_2; polyhaloalkyl, such as CHF_2, CH_2F, CH_2FCHCl, $CHCl_2$, CF_2CF_2H, CH_2CF_3, CH_2ClCH_3, CH_2FCH_3; haloalkoxy is, for example, OCF_3, $OCHF_2$, OCH_2F, CF_3CF_2O, OCH_2CF_3 and OCH_2CH_2Cl; this applies correspondingly to haloalkenyl and other halogen-substituted radicals.

If a skeleton is substituted "by one or more radicals" from a list of radicals (=group) or a generically defined group of radicals, this includes in each case the simultaneous substitution by a plurality of identical and/or structurally different radicals.

Substituted radicals, such as a substituted alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, phenyl, benzyl, heterocyclyl and heteroaryl radical, are, for example, substituted radicals derived from an unsubstituted skeleton, the substituents being, for example, one or more, preferably 1, 2 or 3, radicals from the group consisting of halogen, alkoxy, alkylthio, hydroxyl, amino, nitro, carboxyl, cyano, azido, alkoxycarbonyl, alkylcarbonyl, formyl, carbamoyl, mono- and dialkylaminocarbonyl, substituted amino, such as acylamino, mono- and dialkylamino, trialkylsilyl and optionally substituted cycloalkyl, optionally substituted phenyl, optionally substituted heterocyclyl, where each of the lastmentioned cyclic groups may also be attached via heteroatoms or divalent functional groups as in the alkyl radicals mentioned, and alkylsulfinyl, alkylsulfonyl and, in the case of cyclic radicals (="cyclic skeleton"), also alkyl, haloalkyl, alkylthioalkyl, alkoxyalkyl, optionally substituted mono- and dialkylaminoalkyl and hydroxyalkyl; the term "substituted radicals", such as substituted alkyl, etc., includes as substituents, in addition to the saturated hydrocarbon-containing radicals mentioned, the corresponding unsaturated aliphatic and aromatic radicals, such as optionally substituted alkenyl, alkynyl, alkenyloxy, alkynyloxy, phenyl, phenoxy etc. In the case of substituted cyclic radicals having aliphatic moieties in the ring, this also embraces cyclic systems having substituents which are attached to the ring via a double bond, for example substituted by an alkylidene group, such as methylidene or ethylidene, or an oxo group, imino group or substituted imino group.

The substituents mentioned by way of example ("first substituent level") can, if they contain hydrocarbon-containing moieties, be, if appropriate, substituted further in the moieties ("second substituent level"), for example by one of the substituents as defined for the first substituent level. Corresponding further substituent levels are possible. The term "substituted radical" preferably embraces only one or two substituent levels.

Preferred substituents for the substituent levels are, for example, amino, hydroxyl, halogen, nitro, cyano, mercapto, carboxyl, carboxamide, SF_5, aminosulfonyl, alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkynyl, monoalkylamino, dialkylamino, N-alkanoylamino, alkoxy, alkenyloxy, alkynyloxy, cycloalkoxy, cycloalkenyloxy, alkoxycarbonyl, alkenyloxycarbonyl, alkynyloxycarbonyl, aryloxycarbonyl, alkanoyl, alkenylcarbonyl, alkynylcarbonyl, arylcarbonyl, alkylthio, cycloalkylthio, alkenylthio, cycloalkenylthio, alkynylthio, alkylsulfinyl, alkylsulfonyl, monoalkylaminosulfonyl, dialkylaminosulfonyl, N-alkylaminocarbonyl, N,N-dialkyl-aminocarbonyl, N-alkanoylaminocarbonyl, N-alkanoyl-N-alkylaminocarbonyl, aryl, aryloxy, benzyl, benzyloxy, benzylthio, arylthio, arylamino, benzylamino, heterocyclyl and trialkylsilyl.

In the case of radicals having carbon atoms, preference is given to those having 1 to 6 carbon atoms, preferably 1 to 4 carbon atoms, in particular 1 or 2 carbon atoms. Preference is generally given to substituents selected from the group consisting of halogen, for example fluorine and chlorine, $(C_1$-$C_4)$-alkyl, preferably methyl or ethyl, $(C_1$-$C_4)$-haloalkyl, preferably trifluoromethyl, $(C_1$-$C_4)$-alkoxy, preferably methoxy or ethoxy, $(C_1$-$C_4)$-haloalkoxy, nitro and cyano. Here, particular preference is given to the substituents methyl, methoxy, fluorine and chlorine.

Substituted amino, such as mono- or disubstituted amino, denotes a radical from the group of the substituted amino radicals which are N-substituted, for example, by one or two identical or different radicals selected from the group consisting of alkyl, alkoxy, acyl and aryl; preferably mono- and dialkylamino, mono- and diarylamino, acylamino, N-alkyl-N-acylamino, N-alkyl-N-acylamino and saturated N-heterocycles; here, preference is given to alkyl radicals having 1 to 4 carbon atoms; aryl is preferably phenyl or substituted phenyl; for acyl, the definition given further down applies, preference is given to $(C_1$-$C_4)$-alkanoyl. This applies correspondingly to substituted hydroxylamino or hydrazino.

Substituted amino also includes quarternary ammonium compounds (salts) with four organic substituents at the nitrogen atom.

Optionally substituted phenyl is preferably phenyl which is unsubstituted or mono- or polysubstituted, preferably up to trisubstituted, by identical or different radicals from the group consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-haloalkoxy and nitro, for example o-, m- and p-tolyl, dimethylphenyls, 2-, 3- and 4-chlorophenyl, 2-, 3- and 4-fluorophenyl, 2-, 3- and 4-trifluoromethyl- and -trichloromethylphenyl, 2,4-, 3,5-, 2,5- and 2,3-dichlorophenyl, o-, m- and p-methoxyphenyl.

Optionally substituted cycloalkyl is preferably cycloalkyl which is unsubstituted or mono- or polysubstituted, preferably up to trisubstituted, by identical or different radicals from the group consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkyl and $(C_1$-$C_4)$-haloalkoxy, in particular by one or two $(C_1$-$C_4)$-alkyl radicals.

Optionally substituted heterocyclyl is preferably heterocyclyl which is unsubstituted or mono- or polysubstituted, preferably up to trisubstituted, by identical or different radicals from the group consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-haloalkoxy, nitro and oxo, in particular mono- or polysubstituted by radicals from the group consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkyl and oxo, very particularly substituted by one or two $(C_1$-$C_4)$-alkyl radicals.

Acyl denotes a radical of an organic acid which, formally, is formed by removing a hydroxyl group from the acid function, it also being possible for the organic radical in the acid to be attached to the acid function via a heteroatom. Examples of acyl are the radical —CO—R of a carboxylic acid HO—CO—R and radicals of acids derived therefrom, such as thiocarboxylic acid, unsubstituted or N-substituted iminocarboxylic acids or the radical of carbonic acid monoesters, N-substituted carbamic acid, sulfonic acids, sulfinic acids, N-substituted sulfonamido acids, phosphonic acids, phosphinic acids.

Acyl denotes, for example, formyl, alkylcarbonyl such as $[(C_1$-$C_4)$-alkyl]carbonyl, phenylcarbonyl, alkyloxycarbonyl, phenyloxycarbonyl, benzyloxycarbonyl, alkylsulfonyl, alkylsulfinyl, N-alkyl-1-iminoalkyl, N-alkyl- and N,N-dialkylcarbamoyl and other radicals of organic acids. Here, the radicals may in each case be substituted further in the alkyl or phenyl moiety, for example in the alkyl moiety by one or more

radicals selected from the group consisting of halogen, alkoxy, phenyl and phenoxy; examples of substituents in the phenyl moiety are the substituents which have already been mentioned further above in a general manner for substituted phenyl.

Acyl denotes preferably an acyl radical in the narrower sense, i.e. a radical of an organic acid where the acid group is attached directly to the carbon atom of an organic radical, for example alkanoyl, such as formyl and acetyl, aroyl, such as phenylcarbonyl, and other radicals of saturated or unsaturated organic acids.

"Aroyl" denotes an aryl radical as defined above which is attached via a carbonyl group, for example the benzoyl group.

If a general radical is defined as "hydrogen", this means a hydrogen atom.

The "yl-position" of a radical denotes its point of attachment.

In accordance with the general definitions:

"(C_1-C_6)-alkyl" is a methyl, ethyl, propyl, isopropyl, 1-butyl, 2-butyl, 2-methylpropyl or tert-butyl radical;

"(C_1-C_{10})-alkyl" thus includes the alkyl radicals mentioned above, and also isomeric pentyl radicals, such as n-pentyl, 1,1-dimethylpropyl or 2-methylbutyl, isomeric hexyl, heptyl, octyl, nonyl or decyl radicals.

Accordingly, "(C_2-C_4)-alkenyl" denotes, for example, the vinyl, allyl, 2-methyl-2-propen-1-yl-, 2- or 3-buten-1-yl group,

accordingly, "(C_3-C_{10})-alkenyl" denotes, for example, the allyl, 2-methyl-2-propen-1-yl, 2- or 3-buten-1-yl, pentenyl, 2-methylpentenyl, hexenyl, heptenyl, octenyl, nonenyl or decenyl group.

"(C_2-C_4)-Alkynyl" denotes, for example, the ethynyl, propargyl or 2-butyn-1-yl group,

"(C_3-C_{10})-alkynyl" denotes, for example, the propargyl, 2-butyn-1-yl, 2-pentyn-1-yl, 2-methylpentyn-3-yl, hexynyl, heptynyl, octynyl, nonynyl or the decynyl group.

If the carbon chain of an alkyl radical is interrupted by more than one oxygen atom, this means that two oxygen atoms must not be directly adjacent.

"(C_3-C_6)-Cycloalkyl" denotes the cyclopropyl, cyclobutyl, cyclopentyl or cyclohexyl radical,

"(C_3-C_{10})-cycloalkyl" denotes monocycle alkyl radicals, such as the cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, cyclooctyl or cyclodecyl radical, denotes bicyclic alkyl radicals, such as the norbornyl or bicyclo[2.2.2] octyl radical, or denotes fused systems, such as the decahydronaphthyl radical.

"(C_4-C_{10})-Cycloalkenyl" denotes monocycle cycloalkylene radicals, such as the cyclobutenyl, cyclopentenyl, cyclohexenyl, cycloheptenyl, cyclooctenyl or cyclodecenyl radical, denotes bicyclic alkyl radicals, such as the norbornenyl or bicyclo[2.2.2]octenyl radical, or denotes fused systems, such as the tetra-, hexa- or octahydronaphthyl radical.

"(C_1-C_4)-Alkoxy" and "(C_1-C_{10})-alkoxy" are alkoxy groups whose hydrocarbon radicals have the meanings given under the terms "(C_1-C_4)-alkyl" and "(C_1-C_{10})-alkyl".

In particular for reasons of better crop-plant- or useful-plant-protecting action (safener action), better selectivity and/or better preparability, the use according to the invention of compounds of the formula (I) mentioned or salts thereof is of particular interest in which individual radicals have one of the preferred meanings already mentioned or mentioned below, and in particular those which contain a combination of one or more of the preferred meanings already mentioned or mentioned below.

Preferably, if embraced by the above mentioned general definition of formula (I),

R^1 is a (C_1-C_4)-haloalkyl radical, more preferably CF_3, CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $C(CH_3)_2F$ or $CF_2CF_2CF_3$, more preferably CF_3, CF_2Cl, CF_2H, $CF_2CF_2CF_3$ or CF_2CF_3, more preferably CF_3, CF_2Cl, $CF_2CF_2CF_3$ or CF_2CF_3, in particular CF_3, CF_2Cl or CF_2CF_3.

Preferably,

R^2 is hydrogen or halogen. Here, halogen is preferably fluorine, chlorine, bromine or iodine, in particular chlorine, bromine or iodine, very particularly chlorine or bromine.

Preferably,

R^3 is hydrogen, (C_1-C_{10})-alkyl, (C_2-C_{10})-alkenyl or (C_2-C_{10})-alkynyl,

where each of the 3 last mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio, (C_1-C_4)-alkylamino, di[(C_1-C_4)-alkyl]-amino, [(C_1-C_4)-alkoxy]-carbonyl, [(C_1-C_4)-haloalkoxy]-carbonyl,

(C_3-C_6)-cycloalkyl, which is unsubstituted or substituted by one or more radicals from the group consisting of halogen, (C_1-C_4)-alkyl and (C_1-C_4)-haloalkyl, preferably unsubstituted or substituted by (C_1-C_4)-alkyl,

phenyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy and (C_1-C_4)-alkylthio, and

heterocyclyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and oxo, preferably unsubstituted or substituted by one or more radicals from the group consisting of (C_1-C_4)-alkyl (C_1-C_4)-haloalkyl and (C_1-C_4)-alkoxy,

or (C_3-C_6)-cycloalkyl, (C_4-C_6)-cycloalkenyl, (C_3-C_6)-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring, or (C_4-C_6)-cycloalkenyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring,

where each of the 4 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio, (C_1-C_4)-alkylamino, [(C_1-C_4)-alkoxy]-carbonyl, [(C_1-C_4)-haloalkoxy]-carbonyl,

(C_3-C_6)-cycloalkyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl and (C_1-C_4)-haloalkyl, preferably unsubstituted or substituted by (C_1-C_4)-alkyl,

phenyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy and (C_1-C_4)-alkylthio, and

heterocyclyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and oxo, preferably unsubstituted or substituted by one or more radicals from the group consisting of (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl and (C_1-C_4)-alkoxy,

more preferably hydrogen, (C_1-C_6)-alkyl, (C_2-C_6)-alkenyl or (C_2-C_6)-alkynyl, where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more

radicals selected from the group consisting of (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and (C_1-C_4)-alkoxycarbonyl,

more preferably hydrogen or (C_1-C_4)-alkyl, in particular hydrogen,

and

R^4 is (C_1-C_{10})-alkyl, (C_2-C_{10})-alkenyl or (C_2-C_{10})-alkynyl,

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio, (C_1-C_4)-alkylamino, di[(C_1-C_4)-alkyl]amino, [(C_1-C_4)-alkoxy]-carbonyl, [(C_1-C_4)-haloalkoxy]-carbonyl,

(C_3-C_6)-cycloalkyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl and (C_1-C_4)-haloalkyl, preferably unsubstituted or substituted by (C_1-C_4)-alkyl,

phenyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy and (C_1-C_4)-alkylthio, and

heterocyclyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and oxo, preferably unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkyl (C_1-C_4)-haloalkyl and (C_1-C_4)-alkoxy,

or (C_3-C_6)-cycloalkyl, (C_4-C_6)-cycloalkenyl, (C_3-C_6)-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring, or (C_4-C_6)-cycloalkenyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring,

where each of the 4 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio, (C_1-C_4)-alkylamino, di[(C_1-C_4)-alkyl]-amino, [(C_1-C_4)-alkoxy]-carbonyl, [(C_1-C_4)-haloalkoxy]-carbonyl,

(C_3-C_6)-cycloalkyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl and (C_1-C_4)-haloalkyl, preferably unsubstituted or substituted by (C_1-C_4)-alkyl,

phenyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy and (C_1-C_4)-alkylthio, and

heterocyclyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and oxo, preferably unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl and (C_1-C_4)-alkoxy.

Here, heterocyclyl is preferably a heterocyclic 3- to 9-membered, in particular 5- or 6-membered, ring having 1 to 3 hetero ring atoms from the group consisting of N, O and S.

More preferably,

R^3 is hydrogen, (C_1-C_{10})-alkyl, (C_2-C_{10})-alkenyl or (C_2-C_{10})-alkynyl,

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio, (C_1-C_4)-alkylamino, di[(C_1-C_4)-alkyl]-amino, [(C_1-C_4)-alkoxy]-carbonyl, [(C_1-C_4)-haloalkoxy]-carbonyl,

(C_3-C_6)-cycloalkyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl and (C_1-C_4)-haloalkyl, preferably unsubstituted or substituted by (C_1-C_4)-alkyl,

phenyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy and (C_1-C_4)-alkylthio, and

heterocyclyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and oxo,

or (C_3-C_6)-cycloalkyl or (C_3-C_6)-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring,

where each of the 2 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkyl,

more preferably hydrogen, (C_1-C_6)-alkyl, (C_2-C_6)-alkenyl or (C_2-C_6)-alkynyl, where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and (C_1-C_4)-alkoxycarbonyl,

more preferably hydrogen or (C_1-C_4)-alkyl, in particular hydrogen,

and

R^4 is as already defined above for R^4 or preferably (C_1-C_{10})-alkyl, (C_2-C_{10})-alkenyl or (C_2-C_{10})-alkynyl,

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio, (C_1-C_4)-alkylamino, di[(C_1-C_4)-alkyl]-amino, [(C_1-C_4)-alkoxy]-carbonyl, [(C_1-C_4)-haloalkoxy]-carbonyl,

(C_3-C_6)-cycloalkyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl and (C_1-C_4)-haloalkyl, preferably unsubstituted by (C_1-C_4)-alkyl,

phenyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy and (C_1-C_4)-alkylthio, and

heterocyclyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and oxo,

or (C_3-C_6)-cycloalkyl or (C_3-C_6)-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring,

where each of the 2 lastmentioned radicals is unsubstituted or substituted by one or more radicals from the group consisting of (C_1-C_4)-alkyl.

More preferably.

R^3 is hydrogen, (C_1-C_{10})-alkyl, (C_2-C_{10})-alkenyl or (C_2-C_{10})-alkynyl,

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and [(C_1-C_4)-alkoxy]-carbonyl,

preferably hydrogen, (C_1-C_6)-alkyl, (C_2-C_6)-alkenyl or (C_2-C_6)-alkynyl, where each of the 3 lastmentioned

radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and (C_1-C_4)-alkoxycarbonyl,

more preferably hydrogen or (C_1-C_4)-alkyl, in particular hydrogen,

and

R^4 is as already defined above for R^4 or preferably (C_1-C_{10})-alkyl, (C_2-C_{10})-alkenyl or (C_2-C_{10})-alkynyl,

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and [(C_1-C_4)-alkoxy]-carbonyl,

preferably (C_1-C_6)-alkyl, (C_2-C_6)-alkenyl or (C_2-C_6)-alkynyl, where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and (C_1-C_4)-alkoxycarbonyl.

Particular preference is given to the use according to the invention of compounds of the formula (I) or salts thereof in which

R^1 is CF_3, CF_2Cl, CF_2H, $CF_2CF_2CF_3$ or CF_2CF_3, preferably CF_3, CF_2Cl, $CF_2CF_2CF_3$ or CF_2CF_3, in particular CF_3, CF_2Cl or CF_2CF_3 and

R^2 is hydrogen or halogen, preferably hydrogen, and

R^3 is hydrogen, (C_1-C_{10})-alkyl, (C_1-C_{10})-alkenyl or (C_2-C_{10})-alkynyl,

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and (C_1-C_4)-alkoxycarbonyl,

preferably hydrogen, (C_1-C_6)-alkyl, (C_2-C_6)-alkenyl or (C_2-C_6)-alkynyl, where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and (C_1-C_4)-alkoxycarbonyl,

in particular hydrogen or (C_1-C_4)-alkyl, and

R^4 is (C_1-C_{10})-alkyl, (C_3-C_{10})-alkenyl or (C_3-C_{10})-alkynyl,

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio, (C_1-C_4)-alkylamino, di[(C_1-C_4)-alkyl]-amino, [(C_1-C_4)-alkoxy]-carbonyl, [(C_1-C_4)-haloalkoxy]-carbonyl, (C_3-C_6)-cycloalkyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl and (C_1-C_4)-haloalkyl, preferably unsubstituted or substituted by (C_1-C_4)-alkyl,

phenyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy and (C_1-C_4)-alkylthio, and

heterocyclyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and oxo,

or (C_3-C_6)-cycloalkyl or (C_3-C_6)-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring,

where each of the 2 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkyl,

preferably (C_1-C_{10})-alkyl, (C_2-C_{10})-alkenyl or (C_2-C_{10})-alkynyl,

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and (C_r C_4)-alkoxycarbonyl,

more preferably (C_1-C_6)-alkyl, (C_2-C_6)-alkenyl or (C_2-C_6)-alkynyl, where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio and (C_1-C_4)-alkoxycarbonyl,

or

R^3 and R^4 together with the directly attached nitrogen atom are a four- to eight-membered heterocyclic ring, preferably a 5- or 6-membered heterocyclic ring, which, in addition to the nitrogen atom, may also contain further hetero ring atoms, preferably up to two further hetero ring atoms from the group consisting of N, O and S, and which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, cyano, nitro, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy and (C_1-C_4)-alkylthio,

or

R^3 and R^4 together with the directly attached nitrogen atom are the group —N═CR^5—NR^6R^7, in which

R^5 is hydrogen or (C_1-C_4)-alkyl, with hydrogen being preferred, and

R^6, R^7 independently of one another are hydrogen or (C_1-C_4)-alkyl, preferably (C_1-C_2)-alkyl, or R^5 and R^7 together with the directly attached nitrogen atom form a five- or six-membered, preferably saturated heterocyclic ring, such as, for example, piperidinyl, pyrrolidinyl or morpholinyl.

Particular preference is also given to the use according to the invention of compounds of the formula (I) or salts thereof in which

R^1 is a (C_1-C_6)-haloalkyl radical, preferably from the group consisting of CF_3, CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CF_2CF_2CF_3$ and $C(CH_3)_2F$, more preferably CF_3, CF_2Cl, CF_2H, $CF_2CF_2CF_3$ or CF_2CF_3, even more preferably CF_3, CF_2Cl, $CF_2CF_2CF_3$ or CF_2CF_3, in particular CF_3, CF_2CF_3 or CF_2Cl, and

R^2 is halogen and

R^3 is hydrogen and

R^4 is hydrogen.

Likewise particularly preferred is the use according to the invention of compounds of the formula (I) or salts thereof in which

R^1 is CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H or CF_2CF_2Cl, more preferably CF_2Cl or CF_2H or CF_2CF_3, more preferably CF_2Cl or CF_2CF_3, in particular CF_2Cl,

R^2 is hydrogen and

R^3 is hydrogen or (C_1-C_4)-alkyl and

R^4 is hydrogen.

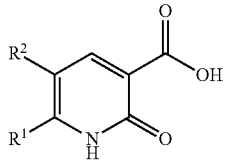
Particular preference is also given to the use according to the invention of compounds of the formula (I) or salts thereof in which the general radicals correspond to the radicals mentioned for R^1, R^2, R^3 and R^4, respectively, in the examples given in the tables, or embrace them.

Particular preference is also given to the use according to the invention of novel compounds of the formula (I) or salts thereof in which R^1, R^2, R^3 and R^4 furthermore preferably have the meanings mentioned for the preferred uses.

The compounds of the general formula (I) can be prepared, for example, by

(a) reacting a carboxylic acid of the general formula (II)

(II)



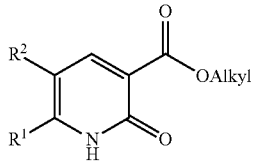
in which R^1 and R^2 are as defined for the compound of the formula (I) to be prepared, with an amine of the formula (III) or a salt thereof,

(III)

in which R^3 and R^4 are as defined for the compound of the formula (I) to be prepared, if appropriate in the presence of a carboxylic acid-activating reagent, for example N,N-carbonyldiimidazole (CDI), or a dehydrating agent, for example dicyclohexylcarbodiimide (DCC), to give the compound of the formula (I) or

(b) reacting a carboxylic ester of the general formula (IV)

(IV)



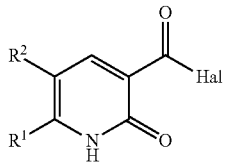
in which R^1 and R^2 are as defined for the compound of the formula (I) to be prepared and "Alkyl" is an alkyl radical, for example methyl or ethyl, with an amine of the formula (III) or a salt thereof,

(III)

in which R^3 and R^4 are as defined for the compound of the formula (I) to be prepared, to give the compound of the formula (I) or

(c) reacting a carbonyl halide or a carboxylic anhydride of the general formula (V),

(V)



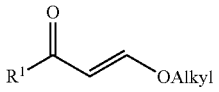
in which R^1 and R^2 are as defined for the compound of the formula (I) to be prepared and Hal is a halogen atom, for example chlorine, or an acyloxy radical, with an amine of the formula (III) or a salt thereof,

(III)

in which R^3 and R^4 are as defined for the compound of the formula (I) to be prepared, to give the compound of the formula (I),

(d), if R^3 and R^4 in the compound of the formula (I) to be prepared are each hydrogen, reacting a compound of the formula (VI),

(VI)



in which R^1 is as defined for the compound of the formula (I) to be prepared, and "Alkyl" is an alkyl radical, for example methyl or ethyl,

with malonamide to give the compound of the formula (I).

The amide formations according to variant (a) can be carried out, for example, in an inert organic solvent in a temperature range between 0° C. and 150° C., preferably between 0° C. and 50° C. Suitable organic solvents are, for example, polar prone or aprotic solvents, such as ethers, for example diethyl ether, tetrahydrofuran and dioxane, or nitrites, such as acetonitrile, or amides, such as dimethylformamide.

The amide formations according to variant (b) can be carried out, for example, in an inert organic solvent in a temperature range between 0° C. and 150° C., preferably between 50° C. and 100° C. Suitable organic solvents are, for example, polar protic or aprotic solvents, such as ethers, for example tetrahydrofuran and dioxane, or nitriles, such as acetonitrile, or amides, such as dimethylformamide. However, preference is given to the amide formation according to variant (b) at elevated temperatures by reacting the undiluted reactants.

The amide formations according to variant (c) can be carried out, for example, in the presence of an acid binder in an inert organic solvent in a temperature range between 0° C. and 150° C., preferably between 50° C. and 100° C. Suitable organic solvents are, for example, polar protic or aprotic solvents, such as ethers, for example diethyl ether, tetrahydrofuran and dioxane, or nitriles, such as acetonitrile, or amides, such as dimethylformamide. Acid binders are, for example, alkali metal or alkaline earth metal carbonates, such as, for example, sodium carbonate, potassium carbonate or calcium carbonate, alkali metal or alkaline earth metal hydroxides, such as sodium hydroxide, potassium hydroxide or calcium hydroxide, or alkali metal hydrides or amides, such as sodium hydride or potassium hydride or sodium amide or potassium amide, or else organic bases, such as triethylamine, pyridine, dimethylaminopyridine, DBU (1,8-diazabicyclo[5.4.0]-undec-7-ene), DBN (1,5-diazabicyclo [4.3.0]non-5-ene) and 1,4-diaza-bicyclo[2.2.2]octane.

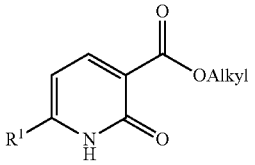
The amide formations according to variant (d) can be carried out analogously to the processes described in EP 522392 and Helv. Chim. Acta 71 (1988) 596-601 and GB 2305174. In

general, the malonamide can be converted in an organic anhydrous polar prone or aprotic solvent, for example in an alcohol, with a strong base, such as an alkali metal, alkali metal hydride or alkali metal alkoxide, into a reactive salt, and then be reacted with the compound of the formula (VI). The reaction with the compound (VI) can generally be carried out in a temperature range between 0° C. and the boiling point of the solvent (depending on the solvent up to about 150° C.).

The compounds of the general formulae (II), (III), (IV) and (V) are either commercially available or can be prepared by or analogously to methods known to the person skilled in the art (for example Helv. Chim. Acta 71 (1988) 596; EP 502740 (U.S. Pat. No. 5,393,734); EP 522392).

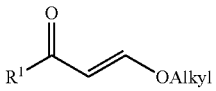
Thus, for example, the compounds of the formula (IVa)

(IVa)

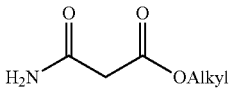


can be obtained by reacting alkoxyvinyl ethers of the formula (VI) with alkyl malonamides of the formula (VII).

(VI)



(VII)



The starting materials of the formula (VI) are either commercially available or can be prepared by known methods (for example Synthesis 2000, 738-742; J. Fluor. Chem., 107, 2001, 285-300; Organometallics 15, 1996, 5374-5379).

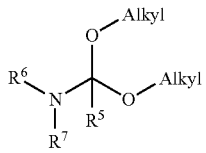
The compounds of the formula (IV) in which R^2 is a halogen atom can be prepared by customary halogenations from the compounds of the formula (IVa).

Suitable for use as halogenating agents for pyridine are, for example, chlorine (J. Org. Chem. 23, 1958, 1614), bromine (Synth. Commun. 19, 1989, 553-560; U.S. Pat. No. 2,532,055), iodine (Tetrahedron Lett. 45, 2004, 6633-6636), sodium hypochlorite (J. Org. Chem. 49, 1984, 4784-4786; J. Med. Chem. 36, 1993, 2676-2688, U.S. Pat. No. 4,960,896), sodium hypobromite (J. Med. Chem. 32, 1989, 2178-2199), thionyl chloride (Organic Letters, 6, 2004, 3-5), N-chlorosuccinimide (J. Med. Chem. 46, 2003, 702-715), N-bromosuccinimide (Chem. Pharm. Bull. 48, 2000, 1847-1853), N-iodosuccinimide (J. Med. Chem. 36, 1993, 2676-2788).

Furthermore, the compounds of the formula (IV) can be prepared from the compounds of the formula (IVa) by successive nitration (for example J. Med. Chem. 36, 1993, 2676-2688; J. Heterocycl. Chem. 33, 1996, 287-294), reduction (for example J. Med. Chem. 33, 1990, 1859-1865), diazotation and subsequent reaction of the diazonium salts in a Sandmeyer or Schiemann reaction.

The compounds of the formula (I) in which R^3 and R^4 together with the directly attached nitrogen atom are the group —N=CR^5—NR^6R^7 can be prepared by reacting a compound of the formula (I) in which R^3 and R^4 are hydrogen with compounds of the formula (VIII) in which R^5, R^6 and R^7 are as defined above

(VIII)



according to known methods (see, for example Synthesis 1980, 119-121; J. Med. Chem., 33, 1990, 2052-2059).

The invention also provides a method for protecting crop plants or useful plants against phytotoxic actions of agrochemicals, such as pesticides or, in particular, herbicides which cause damage to crop plants or useful plants, which method comprises using compounds of the formula (I) or salts thereof as safeners, preferably by applying an effective amount of the compounds of the formula (I) or salts thereof to the plants, to parts of plants or their seeds (or seed).

The compounds (I) (=safeners), together with active compounds (pesticides), are suitable for use in the selective control of harmful organisms in a number of plant crops, for example in crops of economic importance, such as cereals (wheat, barley, triticale, rye, rice, corn, millet), sugar beet, sugar cane, oilseed rape, cotton, sunflower, peas, beans and soybeans. Of particular interest is the use in monocotyledonous crops, such as cereals (wheat, barley, rye, triticale, sorghum), including corn and rice, and monocotyledonous vegetable crops, but also in dicotyledonous crops, such as, for example, soybean, oilseed rape, cotton, grape vines, vegetable plants, fruit plants and ornamental plants. The herbicide/safener combinations with the safeners (I) are also suitable for controlling harmful plants in beds and plots of useful plants and ornamental plants, such as, for example, lawn plots with useful or ornamental lawn, especially lolium, meadow grass or Bermuda grass.

Also of interest from among the useful plants and crop plants in which the herbicide/safener combinations with safeners (I) may be used are mutant crops which are completely or partially tolerant to certain pesticides or completely or partially tolerant transgenic crops, for example corn crops which are resistant to glufosinate or glyphosate, or soybean crops which are resistant to herbicidal imidazolinones. However, the particular advantage of the safeners used in this novel way is their efficient action in crops which normally are insufficiently tolerant to the pesticides being applied.

For the joint use with pesticides, the compounds of the formula (I) according to the invention can be applied simultaneously with the active compounds or in any order, and they are then capable of reducing or completely eliminating harmful side effects of these active compounds in crop plants, without negatively affecting or substantially reducing the activity of these active compounds against unwanted harmful organisms. Here, even damage caused by using a plurality of pesticides, for example a plurality of herbicides or herbicides in combination with insecticides or fungicides, can be reduced substantially or eliminated completely. In this manner, it is possible to extend the field of use of conventional pesticides considerably.

If the compositions according to the invention comprise pesticides, these compositions are, after appropriate dilution, applied either directly to the area under cultivation, to the already germinated harmful and/or useful plants or to the

already emerged harmful and/or useful plants. If the compositions according to the invention do not comprise any pesticide, these compositions can be employed by the tank mix method—i.e. the user mixes and dilutes the separately available products (=the pesticide and the agent protecting the useful plants) immediately prior to application to the area to be treated—or prior to the application of a pesticide, or after the application of a pesticide, or for the pretreatment of seed, i.e., for example, for dressing the seed of the useful plants. Preferably, safener and pesticide are applied within a short time of one another, in particular when the safener is applied to the plants after the herbicide.

The advantageous actions of the compounds (I) according to the invention are observed when they are used together with the pesticides by the pre-emergence method or the post-emergence method, for example in the case of simultaneous application as a tank mix or a coformulation or in the case of a separate application, in parallel or in succession (split application). It is also possible to repeat the application a number of times. In some cases, it may be expedient to combine a pre-emergence application with a post-emergence application. In most cases, one option is a post-emergence application to the useful plant or crop plant together with a simultaneous or later application of the pesticide. Also possible is the use of the compounds (I) according to the invention for seed dressing, for (dip) treatment of seedlings (for example rice) or for the treatment of other propagation material (for example potato tubers).

When using the compounds (I) according to the invention in combination with herbicides, in addition to the safener action, enhanced action, in the herbicidal action, against harmful plants is frequently also observed. Furthermore, in many cases, there is an improved growth of the useful plants and crop plants, and it is possible to increase the harvest yields.

The compositions according to the invention may comprise one or more pesticides. Suitable pesticides are, for example, herbicides, insecticides, fungicides, acaricides and nematicides, which, when used on their own, would cause phytotoxic damage to the crop plants or would probably cause damage. Of particular interest are corresponding pesticidally active compounds from the groups of the herbicides, insecticides, acaricides, nematicides and fungicides, in particular herbicides.

The weight ratio of safener to pesticide can be varied within wide limits and is generally in the range from 1:100 to 100:1, preferably from 1:20 to 20:1, in particular from 1:10 to 10:1. The optimum weight ratio of safener to pesticide depends both on the respective safener used and the respective pesticide, and on the type of useful plant or crop plant to be protected. The required application rate of safener can, depending on the pesticide used and the type of useful plant to be protected, be varied within wide limits and is generally in the range from 0.001 to 10 kg, preferably from 0.01 to 1 kg, in particular from 0.05 to 0.5 kg, of safener per hectare. The weight ratios and amounts required for a successful treatment can be determined by simple preliminary experiments.

For seed dressing, for example, from 0.005 to 20 g of safener per kilogram of seed, preferably from 0.01 to 10 g of safener per kilogram of seed, in particular from 0.05 to 5 g of safener per kilogram of seed, are used.

If solutions of safener are used for seed treatment and the seeds or seedlings are wetted with the solutions, the suitable concentration is generally in the range from 1 to 10 000 ppm, preferably from 100 to 1000 ppm, based on the weight. The weight ratios and amounts required for a successful treatment can be determined by simple preliminary experiments.

The safeners can be formulated in the customary manner, separately or together with the pesticides. Accordingly, the present invention also provides the useful-plant-protecting or crop-plant-protecting compositions.

Preferred is the joint application of safener and pesticide, in particular that of safener and herbicide as a readymix or the use by the tankmix method.

Preference is also given to using the safener (I) in the treatment of seed, followed by the application of pesticides, preferably herbicides, after sowing by the pre- or post-emergence method.

The compounds of the formula (I) or their salts, as such or in the form of their preparations (formulations), can be used in combination with other pesticidally active compounds, such as, for example, insecticides, acaricides, nematicides, herbicides, fungicides, safeners, fertilizers and/or growth regulators, for example as finished formulation or as tank mixes. Here, the combination formulations can be prepared based on the formulations mentioned above, taking into account the physical properties and stabilities of the active compounds to be combined. Suitable as combination partners for the active compounds according to the invention in formulations of mixtures or in tank-mixes are, for example, known, preferably herbicidally active compounds whose action is based on the inhibition of, for example, acetolactate synthase, acetyl-coenzyme-A carboxylase, PS I, PS II, HPPDO, phytoene desaturase, protoporphyrinogen oxidase, glutamine synthetase, cellulose biosynthesis, 5-enolpyruvylshikimate 3-phosphate synthetase. Such compounds and also other compounds which can be used, in some cases having an unknown or a different mechanism of action, are described, for example, in Weed Research 26, 441-445 (1986), or in "The Pesticide Manual", 12th edition 2000, or 13th edition 2003 or 14h edition 2006/2007, or in the corresponding "e-Pesticide Manual", version 4 (2006), all published by the British Crop Protection Council, (hereinbelow also referred to in short as "PM"), and in the literature cited therein. Lists of "common names" are also available in "The Compendium of Pesticide Common Names" on the Internet. Examples of herbicides known from the literature which may be combined with the compounds of the formula (I) are, for example, the following active compounds (note: the compounds are referred to either by the "common name" according to the International Organization for Standardization (ISO) or by the chemical name, if appropriate together with a customary code number):

acetochlor; acibenzolar-5-methyl; acifluorfen(-sodium); aclonifen; AD-67; AKH 7088, i.e. [[[1-[5-[2-chloro-4-(trifluoromethyl)phenoxy]-2-nitrophenyl]-2-methoxyethylidene]amino]oxy]acetic acid and methyl [[[1-[5-[2-chloro-4-(trifluoromethyl)phenoxy]-2-nitrophenyl]-2-methoxyethylidene]-amino]oxy]acetate; alachlor; alloxydim (-sodium); ametryn; amicarbazone, amidochlor, amidosulfuron; aminopyralid; amitrol; AMS, i.e. ammonium sulfamate; ancimidol; anilofos; asulam; atrazine; aviglycine; azafenidin, azimsulfuron (DPX-A8947); aziprotryn; barban; BAS 516 H, i.e. 5-fluoro-2-phenyl-4H-3,1-benzoxazin-4-one; beflubutamid (UBH-509), benazolin(-ethyl); bencarbazone; benfluralin; benfuresate; benoxacor; bensulfuron(-methyl); bensulide; bentazone; benzfendizone; benzobicyclon, benzofenap; benzofluor; benzoylprop(-ethyl); benzthiazuron; bialaphos; bifenox; bispyribac(-sodium) (KIH-2023); borax; bromacil; bromobutide; bromofenoxim; bromoxynil; bromuron; buminafos; busoxinone; butachlor; butafenacil, butamifos; butenachlor (KH-218); buthidazole; butralin; butroxydim, butylate; cafenstrole (CH-900); carbetamide; carfentrazone(-ethyl); CDAA, i.e. 2-chloro-N,N-di-2-prope-

nylacetamide; CDEC, i.e. 2-chlorallyl diethyldithiocarbamate; chlomethoxyfen; chloramben; chlorazifop-butyl, chlorbromuron; chlorbufam; chlorfenac; chlorfenprop; chlorflurecol(-methyl); chlorflurenol(-methyl); chloridazon; chlorimuron(-ethyl); chlormequat(chloride); chlornitrofen; chlorophthalim (MK-616); chlorotoluron; chloroxuron; chlorpropham; chlorsulfuron; chlorthal-dimethyl; chlorthiamid; chlortoluron, cinidon(-methyl and -ethyl), cinmethylin; cinosulfuron; clefoxydim, clethodim; clodinafop and its ester derivatives (for example clodinafop-propargyl); clofencet; clomazone; clomeprop; cloprop; cloproxydim; clopyralid; clopyrasulfuron(-methyl), cloquintocet(-mexyl); cloransulam(-methyl), cumyluron (JC 940); cyanamide; cyanazine; cycloate; cyclosulfamuron (AC 104); cycloxydim; cycluron; cyhalofop and its ester derivatives (for example the butyl ester, DEH-112); cyperquat; cyprazine; cyprazole; cyprosulfamide; daimuron; 2,4-D, 2,4-DB; dalapon; daminozide; dazomet; n-decanol; desmedipham; desmetryn; di-allate; dicamba; dichlobenil; dichlormid; dichlorprop(-P) salts; diclofop and its esters, such as diclofop-methyl; diclofop-P(-methyl); diclosulam, diethatyl(-ethyl); difenoxuron; difenzoquat(metilsulfate); diflufenican; diflufenzopyr(-sodium); dimefuron; dimepiperate, dimethachlor; dimethametryn; dimethazone; dimethenamid (SAN-582H); dimethenamide-P; dimethylarsinic acid; dimethipin; dimetrasulfuron, dinitramine; dinoseb; dinoterb; diphenamid; dipropetryn; diquat salts; dithiopyr; diuron; DNOC; eglinazine-ethyl; EL 77, i.e. 5-cyano-1-(1,1-dimethylethyl)-N-methyl-1H-pyrazole-4-carboxamide; endothal; epoprodan, EPTC; esprocarb; ethalfluralin; ethametsulfuron-methyl; ethephon; ethidimuron; ethiozin; ethofumesate; ethoxyfen and its esters (for example the ethyl ester, HN-252); ethoxysulfuron, etobenzanid (HW 52); F5231, i.e. N-[2-chloro-4-fluoro-5-[4-(3-fluoropropyl)-4,5-dihydro-5-oxo-1H-tetrazol-1-yl]phenyl] ethanesulfonamide; fenchlorazole(-ethyl); fenclorim; fenoprop; fenoxan, fenoxaprop and fenoxaprop-P and also their esters, for example fenoxaprop-P-ethyl and fenoxaprop-ethyl; fenoxydim; fentrazamide, fenuron; ferrous sulfate; flamprop(-methyl or -isopropyl or -isopropyl-L); flamprop-M(-methyl or -isopropyl); flazasulfuron; florasulam, fluazifop and fluazifop-P and their esters, for example fluazifop-butyl and fluazifop-P-butyl; fluazolate, flucarbazone(-sodium), flucetosulfuron; fluchloralin; flufenacet; flufenpyr(-ethyl); flumetralin; flumetsulam; flumeturon; flumiclorac(-pentyl), flumioxazin (S-482); flumipropyn; fluometuron, fluorochloridone, fluorodifen; fluoroglycofen(-ethyl); flupoxam (KNW-739); flupropacil (UBIC-4243); flupropanoate; flupyrsulfuron(-methyl)(-sodium); flurazole; flurenol(-butyl); fluridone; flurochloridone; fluoroxypyr(-meptyl); flurprimidol, flurtamone; fluthiacet(-methyl) (KIH-9201); fluthiamide, fluxofenim; fomesafen; foramsulfuron, forchlorfenuron; fosamine; furilazole; furyloxyfen; gibberillic acid; glufosinate(-ammonium); glyphosate(-isopropylammonium); halosafen; halosulfuron(-methyl); haloxyfop and its esters; haloxyfop-P(=R-haloxyfop) and its esters; HC-252; hexazinone; imazamethabenz(-methyl); imazamethapyr, imazamox, imazapic, imazapyr; imazaquin and salts, such as the ammonium salt; imazethamethapyr; imazethapyr; imazosulfuron; inabenfide; indanofan; indole-3-acetic acid; 4-indol-3-ylbutyric acid; iodosulfuron-methyl(-sodium); ioxynil; isocarbamid; isopropalin; isoproturon; isouron; isoxaben; isoxachlortole, isoxadifen(-ethyl); isoxaflutole, isoxapyrifop; karbutilate; lactofen; lenacil; linuron; maleic hydrazide (MH), MCPA; MCPB; mecoprop(-P); mefenacet; mefenpyr(diethyl); mefluidid; mepiquat(-chloride); mesosulfuron(-methyl); mesotrione, metam; metamifop; metamitron; metazachlor; methabenzthiazuron; metham; methazole; methoxyphenone; methylarsonic acid; methylcyclopropene; methyldymron; methyl isothiocyanate; methabenzthiazuron; metobenzuron; metobromuron; (alpha-)metolachlor; metosulam (XRD 511); metoxuron; metribuzin; metsulfuron-methyl; molinate; monalide; monocarbamide dihydrogensulfate; monolinuron; monuron; MT 128, i.e. 6-chloro-N-(3-chloro-2-propenyl)-5-methyl-N-phenyl-3-pyridazinamine; MT 5950, i.e. N-[3-chloro-4-(1-methylethyl)phenyl]-2-methylpentanamide; naproanilide; napropamide; naptalam; NC 310, i.e. 4-(2,4-dichlorobenzoyl)-1-methyl-5-benzyloxypyrazole; neburon; nicosulfuron; nipyraclofen; nitralin; nitrofen; nitrophenolate mixture; nitrofluorfen; nonanoic acid; norflurazon; orbencarb; orthasulfamuron; oxabetrinil; oryzalin; oxadiargyl (RP-020630); oxadiazon; oxasulfuron, oxaziclomefone, oxyfluorfen; paclobutrazol; paraquat(dichloride); pebulate; pelargonic acid, pendimethalin; penoxsulam; pentachlorophenol; pentanochlor; pentoxazone, perfluidone; pethoxamid; phenisopham; phenmedipham; picloram; picolinafen, pinoxaden, piperophos; piributicarb; pirifenop-butyl; pretilachlor; primisulfuron(-methyl); probenazole; procarbazone-(sodium), propazine; prodiamine; profluralin; profoxydim; prohexadione(-calcium); prohydrojasmon; proglinazine(-ethyl); prometon; prometryn; propachlor; propanil; propaquizafop; propazine; propham; propisochlor; propoxycarbazone(-sodium) (MKH-6561); n-propyl dihydrojasmonate; propyzamide; prosulfalin; prosulfocarb; prosulfuron (CGA-152005); prynachlor; pyraclonil; pyraflufen(ethyl) (ET-751); pyrasulfotole; pyrazolynate; pyrazon; pyrazosulfuron(-ethyl); pyrazoxyfen; pyribenzoxim, pyributicarb, pyridafol, pyridate; pyriftalid; pyriminobac(-methyl) (KIH-6127); pyrimisulfan (KIH-5996); pyrithiobac(-sodium) (KIH-2031); pyroxasulfone (KIH-485); pyroxofop and its esters (for example the propargyl ester); pyroxsulam; quinclorac; quinmerac; quinoclamine, quinofop and its ester derivatives, quizalofop and quizalofop-P and their ester derivatives, for example quizalofop-ethyl; quizalofop-P-tefuryl and -ethyl; renriduron; rimsulfuron (DPX-E 9636); S 275, i.e. 2-[4-chloro-2-fluoro-5-(2-propynyloxy)phenyl]-4,5,6,7-tetrahydro-2H-indazol; saflufenacil (N'-[2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-3,6-dihydro-1(2H)-pyrimidinyl)benzoyl]-N-isopropyl-N-methylsulfamide), secbumeton; sethoxydim; siduron; simazine; simetryn; sintofen; SN 106279, i.e. 2-[[7-[2-chloro-4-(trifluoromethyl)phenoxy]-2-naphthalenyl]oxy]propanoic acid and methyl 2-[[7-[2-chloro-4-(trifluoromethyl)phenoxy]-2-naphthalenyl]oxy]propanoate; sulcotrione, sulfentrazone (FMC-97285, F-6285); sulfazuron; sulfometuron(-methyl); sulfosate (ICI-A0224); sulfosulfuron, TCA; tebutam (GCP-5544); tebuthiuron; tecnacene; tembotrione; tefuryltrione; tepraloxydim, terbacil; terbucarb; terbuchlor; terbumeton; terbuthylazine; terbutryn; TFH 450, i.e. N,N-diethyl-3-[(2-ethyl-6-methylphenyl)sulfonyl]-1H-1,2,4-triazole-1-carboxamide; thenylchlor (NSK-850); thiafluamide, thiazafluoron; thiazopyr (Mon-13200); thidiazimin (SN-24085); thidiazuron; thiencarbazone; thifensulfuron(-methyl); thiobencarb; Ti 35; tiocarbazil; topramezone; tralkoxydim; tri-allate; triasulfuron; triaziflam, triazofenamide; tribenuron(-methyl); triclopyr; tridiphane; trietazine; trifloxysulfuron; trifluralin; triflusulfuron and esters (for example the methyl ester, DPX-66037); trimeturon; trinexapac; tritosulfuron, tsitodef; uniconazole; vernolate; WL 110547, i.e. 5-phenoxy-1-[3-(trifluoromethyl)phenyl]-1H-tetrazole; D-489; LS 82-556; KPP-300; NC-324; NC-330; DPX-N8189; SC-0774; DOWCO-535; DK-8910; V-53482; PP-600 and MBH-001.

Insecticides which may cause damage to plants when used on their own or together with herbicides are, for example, the following:

Organophosphates, for example terbufos (Counter®), fonofos (Dyfonate®), phorate (Thimet®), chlorpyriphos (Reldan®), carbamates, such as carbofuran (Furadan®), pyrethroid insecticides, such as tefluthrin (Force®), deltamethrin (Decis®) and tralomethrin (Scout®), and other insecticidal agents having a different mechanism of action.

Herbicides, whose phytotoxic side effects on crop plants can be reduced using compounds of the formula (I) are, for example, herbicides from the group of the carbamates, thiocarbamates, haloacetanilides, substituted phenoxy-, naphthoxy- and phenoxyphenoxycarboxylic acid derivatives and heteroaryloxyphenoxyalkanecarboxylic acid derivatives, such as quinolyloxy-, quinoxalyloxy-, pyridyloxy-, benzoxazolyloxy- and benzothiazolyloxyphenoxyalkanecarboxylic acid esters, cyclohexanedione oximes, benzoylcyclohexanediones, benzoylisoxazoles, benzoylpyrazoles, imidazolinones, pyrimidinyloxypyridinecarboxylic acid derivatives, pyrimidyloxybenzoic acid derivatives, sulfonylureas, sulfonylaminocarbonyltriazolinones, triazolopyrimidinesulfonamide derivatives, phosphinic acid derivatives and salts thereof, glycine derivatives, triazolinones, triazinones and also S—(N-aryl-N-alkylcarbamoylmethyl)dithiophosphoric esters, pyridinecarboxylic acids, pyridines, pyridinecarboxamides, 1,3,5-triazines and others.

Preference is given here to phenoxyphenoxy- and heteroaryloxyphenoxycarboxylic acid esters and salts, cyclohexanedione oximes, benzoylcyclohexanediones, benzoylisoxazoles, benzoylpyrazoles sulfonylureas, sulfonylaminocarbonyltriazolinones, imidazolinones and mixtures of the active compounds mentioned with one another and/or with active compounds used for broadening the activity spectrum of the herbicides, for example bentazone, cyanazine, atrazine, bromoxynil, dicamba and other leaf-acting herbicides.

Herbicides which are suitable for combination with the safeners according to the invention are, for example:

A) herbicides of the type of the phenoxyphenoxy- and heteroaryloxyphenoxycarboxylic acid derivatives, such as

A1) phenoxyphenoxy- and benzyloxyphenoxycarboxylic acid derivatives, for example methyl 2-(4-(2,4-dichlorophenoxy)phenoxy)propionate (diclofop-methyl),

methyl 2-(4-(4-bromo-2-chlorophenoxy)phenoxy)propionate (DE-A 26 01 548 (U.S. Pat. No. 4,370,489)),

methyl 2-(4-(4-bromo-2-fluorophenoxy)phenoxy)propionate (U.S. Pat. No. 4,808,750),

methyl 2-(4-(2-chloro-4-trifluoromethylphenoxy)phenoxy) propionate (DE-A 24 33 067 (U.S. Pat. No. 4,332,960)),

methyl 2-(4-(2-fluoro-4-trifluoromethylphenoxy)phenoxy) propionate (U.S. Pat. No. 4,808,750),

methyl 2-(4-(2,4-dichlorobenzyl)phenoxy)propionate (DE-A 24 17 487 (U.S. Pat. No. 4,088,474)),

ethyl 4-(4-(4-trifluoromethylphenoxy)phenoxy)pent-2-enoate,

methyl 2-(4-(4-trifluoromethylphenoxy)phenoxy)propionate (DE-A 24 33 067),

butyl (R)-2-[4-(4-cyano-2-fluorophenoxy)phenoxy]propionate (cyhalofop-butyl)

A2) "monocyclic" heteroaryloxyphenoxyalkanecarboxylic acid derivatives, for example ethyl 2-(4-(3,5-dichloropyridyl-2-oxy)phenoxy)propionate (EP-A 0 002 925),

propargyl 2-(4-(3,5-dichloropyridyl-2-oxy)phenoxy)propionate (EP-A 0 003 114 (U.S. Pat. No. 4,300,944)),

methyl (RS)- or (R)-2-(4-(3-chloro-5-trifluoromethyl-2-pyridyloxy)phenoxy)propionate (haloxyfop-methyl or haloxyfop-P-methyl),

ethyl 2-(4-(3-chloro-5-trifluoromethyl-2-pyridyloxy)phenoxy)propionate (EP-A 0 003 890 (U.S. Pat. No. 4,840,664)),

propargyl 2-(4-(5-chloro-3-fluoro-2-pyridyloxy)phenoxy) propionate (clodinafop-propargyl),

butyl (RS)- or (R)-2-(4-(5-trifluoromethyl-2-pyridyloxy) phenoxy)propionate (fluazifop-butyl or fluazifop-P-butyl),

(R)-2-[4-(3-chloro-5-trifluoromethyl-2-pyridyloxy)phenoxy]propionic acid

A3) "bicyclic" heteroaryloxyphenoxyalkanecarboxylic acid derivatives, for example methyl and ethyl (RS)- or (R)-2-(4-(6-chloro-2-quinoxalyloxy)phenoxy)propionate (quizalofop-methyl and -ethyl or quizalofop-P-methyl and -P-ethyl),

methyl 2-(4-(6-fluoro-2-quinoxalyloxy)phenoxy)propionate (see J. Pest. Sci. Vol. 10, 61 (1985)),

2-isopropylidenaminooxyethyl (R)-2-(4-(6-chloro-2-quinoxalyloxy)phenoxy)propionate (propaquizafop),

ethyl (RS)- or (R)-2-(4-(6-chlorobenzoxazol-2-yloxy)phenoxy)propionate (fenoxaprop-ethyl or fenoxaprop-P-ethyl),

ethyl 2-(4-(6-chlorobenzthiazol-2-yloxy)phenoxy)propionate (DE-A-26 40 730 (U.S. Pat. No. 4,130,413)),

tetrahydro-2-furylmethyl (RS)- or (R)-2-(4-(6-chloroquinoxalyloxy)phenoxy) propionate (EP-A-0 323 727 (U.S. Pat. No. 5,120,348));

(R)-2-[4-(6-chloro-1,3-benzoxazol-2-yloxy)phenoxy]-2'-fluoro-N-methylpropionanilide (metamifop);

B) herbicides from the group of the sulfonylureas, such as pyrimidinyl- or triazinylaminocarbonyl[benzene-, -pyridine-, -pyrazole-, -thiophene- and -(alkyl-sulfonyl)alkylamino]sulfamides. Preferred substituents on the pyrimidine ring or the triazine ring are alkoxy, alkyl, haloalkoxy, haloalkyl, halogen or dimethylamino, it being possible to combine all substituents independently of one another. Preferred substituents in the benzene, pyridine, pyrazole, thiophene or (alkylsulfonyl)alkylamino moiety are alkyl, alkoxy, halogen, nitro, alkoxycarbonyl, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, alkoxyaminocarbonyl, haloalkoxy, haloalkyl, alkylcarbonyl, alkoxyalkyl, (alkanesulfonyl)alkylamino. Such suitable sulfonylureas are, for example,

B1) phenyl- and benzylsulfonylureas and related compounds, for example 1-(2-chlorophenylsulfonyl)-3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)urea (chlorsulfuron),

1-(2-ethoxycarbonylphenylsulfonyl)-3-(4-chloro-6-methoxypyrimidin-2-yl)urea (chlorimuron-ethyl),

1-(2-methoxyphenylsulfonyl)-3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)urea (metsulfuron-methyl),

1-(2-chloroethoxyphenylsulfonyl)-3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)urea (triasulfuron),

1-(2-methoxycarbonylphenylsulfonyl)-3-(4,6-dimethylpyrimidin-2-yl)urea (sulfumeturon-methyl),

1-(2-methoxycarbonylphenylsulfonyl)-3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-3-methylurea (tribenuron-methyl),

1-(2-methoxycarbonylbenzylsulfonyl)-3-(4,6-dimethoxypyrimidin-2-yl)urea (bensulfuron-methyl),

1-(2-methoxycarbonylphenylsulfonyl)-3-(4,6-bis-(difluoromethoxy)pyrimidin-2-yl)urea (primisulfuron-methyl),

3-(4-ethyl-6-methoxy-1,3,5-triazin-2-yl)-1-(2,3-dihydro-1,1-dioxo-2-methylbenzo[b]thiophene-7-sulfonyl)urea (EP-A 0 079 683 (U.S. Pat. No. 4,492,596),

3-(4-ethoxy-6-ethyl-1,3,5-triazin-2-yl)-1-(2,3-dihydro-1,1-dioxo-2-methylbenzo[b]-thiophene-7-sulfonyl)urea (EP-A 0 079 683),

3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-1-(2-methoxycarbonyl-5-iodophenylsulfonyl)urea (WO 92/13845 (U.S. Pat. No. 5,463,081)),

methyl 2-[4-dimethylamino-6-(2,2,2-trifluoroethoxy)-1,3,5-triazin-2-ylcarbamoylsulfamoyl]-3-methylbenzoate (DPX-66037, triflusulfuron-methyl),

oxetan-3-yl 2-[(4,6-dimethylpyrimidin-2-yl)carbamoylsulfamoyl]benzoate (CGA-277476, oxasulfuron),

methyl 4-iodo-2-[3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl) ureidosulfonyl]benzoate, sodium salt (iodosulfuron-methyl-sodium),

methyl 2-[3-(4,6-dimethoxypyrimidin-2-yl)ureidosulfonyl]-4-methanesulfonylaminomethylbenzoate (mesosulfuron-methyl, WO 95/10507 (U.S. Pat. No. 5,648,315)),

N,N-dimethyl-2-[3-(4,6-dimethoxypyrimidin-2-yl)ureidosulfonyl]-4-formylaminobenzamide (foramsulfuron, WO 95/01344 (U.S. Pat. No. 5,658,854)),

1-(4,6-dimethoxy-1,3,5-triazin-2-yl)-3-[2-(2-methoxyethoxy)phenylsulfonyl]urea (cinosulfuron),

methyl 2-[(4-ethoxy-6-methylamino-1,3,5-triazin-2-yl)carbamoylsulfamoyl]benzoate (ethametsulfuron-methyl),

1-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-3-[2-(3,3,3-trifluoropropyl)phenylsulfonyl]urea (prosulfuron),

1-(4-methoxy-6-trifluoromethyl-1,3,5-triazin-2-yl)-3-(2-trifluoromethylbenzenesulfonyl)urea (tritosulfuron);

N-[(4-methylpyrimidin-2-yl)carbamoyl]-2-nitrobenzenesulfonamide (monosulfuron), methyl-2-[({[4-methoxy-6-(methylthio)pyrimidin-2-yl]carbamoyl}amino)sulfonyl] benzoate

B2) thienylsulfonylureas, for example

1-(2-methoxycarbonylthiophen-3-yl)-3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)urea (thifensulfuron-methyl);

B3) pyrazolylsulfonylureas, for example

1-(4-ethoxycarbonyl-1-methylpyrazol-5-ylsulfonyl)-3-(4,6-dimethoxypyrimidin-2-yl)urea (pyrazosulfuron-ethyl),

methyl 3-chloro-5-(4,6-dimethoxypyrimidin-2-ylcarbamoylsulfamoyl)-1-methylpyrazole-4-carboxylate (halosulfuron-methyl),

methyl 5-(4,6-dimethylpyrimidin-2-yl-carbamoylsulfamoyl)-1-(2-pyridyl)pyrazole-4-carboxylate (NC-330, see Brighton Crop Prot. Conference 'Weeds' 1991, Vol. 1, p. 45 et seq.),

1-(4,6-dimethoxypyrimidin-2-yl)-3-[1-methyl-4-(2-methyl-2H-tetrazol-5-yl)pyrazol-5-ylsulfonyl]urea (DPX-A8947, azimsulfuron);

N-[(4,6-dimethoxypyrimidin-2-yl)carbamoyl]-4-(5,5-dimethyl-4,5-dihydroisoxazol-3-yl)-1,3-dimethyl-1H-pyrazole-5-sulfonamide;

B4) sulfonediamide derivatives, for example

3-(4,6-dimethoxypyrimidin-2-yl)-1-(N-methyl-N-methylsulfonylaminosulfonyl)urea (amidosulfuron) and its structural analogs (EP-A 0 131 258 (U.S. Pat. No. 4,601,747) and Z. Pfl. Krankh. Pfl. Schutz, special issue XII, 489-497 (1990));

B5) pyridylsulfonylureas, for example

1-(3-N,N-dimethylaminocarbonylpyridin-2-ylsulfonyl)-3-(4,6-dimethoxypyrimidin-2-yl)urea (nicosulfuron),

1-(3-ethylsulfonylpyridin-2-ylsulfonyl)-3-(4,6-dimethoxypyrimidin-2-yl)urea (rimsulfuron),

methyl 2-[3-(4,6-dimethoxypyrimidin-2-yl)ureidosulfonyl]-6-trifluoromethyl-3-pyridinecarboxylate, sodium salt (DPX-KE 459, flupyrsulfuron-methyl-sodium),

3-(4,6-dimethoxypyrimidin-2-yl)-1-(3-N-methylsulfonyl-N-methylaminopyridin-2-yl)sulfonylurea or its salts (DE-A 40 00 503 (U.S. Pat. No. 5,494,886) and DE-A 40 30 577),

1-(4,6-dimethoxypyrimidin-2-yl)-3-(3-trifluoromethyl-2-pyridylsulfonyl)urea (flazasulfuron),

1-(4,6-dimethoxypyrimidin-2-yl)-3-[3-(2,2,2-trifluoroethoxy)-2-pyridylsulfonyl]urea sodium salt (trifloxysulfuron-sodium);

(1RS,2RS; 1RS,2SR)-1-{3-[(4,6-dimethoxypyrimidin-2-ylcarbamoyl)sulfamoyl]-2-pyridyl}-2-fluoropropyl methoxyacetate (flucetosulfuron);

B6) alkoxyphenoxysulfonylureas, for example

3-(4,6-dimethoxypyrimidin-2-yl)-1-(2-ethoxyphenoxy)sulfonylurea or its salts (ethoxysulfuron);

B7) imidazolylsulfonylureas, for example

1-(4,6-dimethoxypyrimidin-2-yl)-3-(2-ethylsulfonylimidazo[1,2-a]pyridin-3-yl)sulfonylurea (MON 37500, sulfosulfuron),

1-(2-chloroimidazo[1,2-a]pyridin-3-ylsulfonyl)-3-(4,6-dimethoxypyrimidin-2-yl)urea (imazosulfuron);

2-chloro-N-[(4,6-dimethoxypyrimidin-2-yl)carbamoyl]-6-propylimidazo[1,2-b]pyridazine-3-sulfonamide;

B8) phenylaminosulfonylureas, for example

1-[2-(cyclopropylcarbonyl)phenylaminosulfonyl]-3-(4,6-dimethoxypyrimidin-2-yl)urea (cyclosulfamuron);

1-(4,6-dimethoxypyrimidin-2-yl)-3-[2-(dimethylcarbamoyl) phenylsulfamoyl]urea (orthosulfamuron);

C) chloroacetanilides, for example

acetochlor, alachlor, butachlor, dimethachlor, dimethenamid, dimethenamid-P; metazachlor, metolachlor, S-metolachlor, pethoxamid, pretilachlor, propachlor, propisochlor and thenylchlor;

D) thiocarbamates, for example

S-ethyl N,N-dipropylthiocarbamate (EPTC),

S-ethyl N,N-diisobutylthiocarbamate (butylate);

cycloate, dimepiperate, esprocarb, molinate, orbencarb, pebulate, prosulfocarb, thiobencarb, tiocarbazil, tri-allate and vernolate;

E) cyclohexanedione oximes, for example

alloxydim, butroxydim, clethodim, cloproxydim, cycloxydim, profoxydim, sethoxydim, tepraloxydim and tralkoxydim;

F) imidazolinones, for example

imazamethabenz-methyl, imazapic, imazamox, imazapyr, imazaquin and imazethapyr;

G) triazolopyrimidinesulfonamide derivatives, for example

chloransulam-methyl, diclosulam, florasulam, flumetsulam, metosulam and penoxsulam, i.e. 2-(2,2-difluoroethoxy)-N-(5,8-dimethoxy[1,2,4]triazolo[1,5-c]pyrimidin-2-yl)-6-(trifluoromethyl)benzenesulfonamide, and pyroxsulam, i.e. N-(5,7-dimethoxy[1,2,4]triazolo[1,5-a]pyrimidin-2-yl)-2-methoxy-4-(trifluoromethyl)-3-pyridinesulfonamide;

H) benzoylcyclohexanediones, for example

2-(2-chloro-4-methylsulfonylbenzoyl)cyclohexane-1,3-dione (SC-0051, sulcotrione),

2-(2-nitrobenzoyl)-4,4-dimethylcyclohexane-1,3-dione (EP-A 0 274 634),

2-(2-nitro-3-methylsulfonylbenzoyl)-4,4-dimethylcyclohexane-1,3-dione (WO 91/13548),

2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione (mesotrione)

2-[2-chloro-3-(5-cyanomethyl-4,5-dihydroisoxazol-3-yl)-4-(ethylsulfonyl)benzoyl]-1,3-cyclohexanedione,

2-[2-chloro-3-(5-cyanomethyl-4,5-dihydroisoxazol-3-yl)-4-(methylsulfonyl)benzoyl]-1,3-cyclohexanedione,
2-[2-chloro-3-(5-ethoxymethyl-4,5-dihydroisoxazol-3-yl)-4-(ethylsulfonyl)benzoyl]-1,3-cyclohexanedione,
2-[2-chloro-3-(5-ethoxymethyl-4,5-dihydroisoxazol-3-yl)-4-(methylsulfonyl)benzoyl]-1,3-cyclohexanedione,
2-[2-chloro-3-[(2,2,2-trifluoroethoxy)methyl]-4-(ethylsulfonyl)benzoyl]-1,3-cyclohexanedione,
2-[2-chloro-3-[(2,2,2-trifluoroethoxy)methyl]-4-(methylsulfonyl)benzoyl]-1,3-cyclohexanedione (tembotrione),
2-[2-chloro-3-[(2,2-difluoroethoxy)methyl]-4-(ethylsulfonyl)benzoyl]-1,3-cyclohexanedione,
2-[2-chloro-3-[(2,2-difluoroethoxy)methyl]-4-(methylsulfonyl)benzoyl]-1,3-cyclohexanedione,
2-[2-chloro-3-[(2,2,3,3-tetrafluoropropoxy)methyl]-4-(ethylsulfonyl)benzoyl]-1,3-cyclohexanedione,
2-[2-chloro-3-[(2,2,3,3-tetrafluoropropoxy)methyl]-4-(methylsulfonyl)benzoyl]-1,3-cyclohexanedione,
2-[2-chloro-3-(cyclopropylmethoxy)-4-(ethylsulfonyl)benzoyl]-1,3-cyclohexanedione,
2-[2-chloro-3-(cyclopropylmethoxy)-4-(methylsulfonyl) benzoyl]-1,3-cyclohexanedione,
2-[2-chloro-3-(tetrahydrofuran-2-ylmethoxymethyl)-4-(ethylsulfonyl)benzoyl]-1,3-cyclohexanedione,
2-[2-chloro-3-(tetrahydrofuran-2-ylmethoxymethyl)-4-(methylsulfonyl)benzoyl]-1,3-cyclohexanedione (tefuryltrione),
2-[2-chloro-3-[2-(2-methoxyethoxy)ethoxymethyl]-4-(ethylsulfonyl)benzoyl]-1,3-cyclohexanedione,
2-[2-chloro-3-[2-(2-methoxyethoxy)ethoxymethyl]-4-(methylsulfonyl)benzoyl]-1,3-cyclohexanedione,
3-({2-[(2-methoxyethoxy)methyl]-6-(trifluoromethyl)pyridin-3-yl}carbonyl)-bicyclo[12.1]octane-2,4-dione (WO 2001094339);

I) benzoylisoxazoles, for example

5-cyclopropyl-[2-(methylsulfonyl)-4-(trifluoromethyl)benzoyl]isoxazole (isoxaflutole);
(4-chloro-2-mesylphenyl)(5-cyclopropyl-1,2-oxazol-4-yl) methanone (isoxachlortole);

j) benzoylpyrazoles, for example

2-[4-(2,4-dichloro-m-toluoyl)-1,3-dimethylpyrazol-5-yloxy]-4'-methylacetophenone (benzofenap),
4-(2,4-dichlorobenzoyl)-1,3-dimethylpyrazol-5-yltoluene-4-sulfonate (pyrazolynate),
2-[4-(2,4-dichlorobenzoyl)-1,3-dimethylpyrazol-5-yloxy] acetophenone (pyrazoxyfen);
5-hydroxy-1-methyl-4-[2-(methylsulfonyl)-4-trifluoromethylbenzoyl]pyrazole (WO 01/74785 (U.S. Pat. No. 6,420,317)),
1-ethyl-5-hydroxy-4-[2-(methylsulfonyl)-4-trifluoromethylbenzoyl]pyrazole (WO 01/74785),
1,3-dimethyl-5-hydroxy-4-[2-(methylsulfonyl)-4-trifluoromethylbenzoyl]pyrazole (WO 01/74785),
1-ethyl-5-hydroxy-3-methyl-4-[2-(methylsulfonyl)-4-trifluoromethylbenzoyl]pyrazole (pyrasulfotole, WO 01/74785),
5-hydroxy-1-methyl-4-[-2-chlor-3-(4,5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]pyrazole (WO 99/58509 (U.S. Pat. No. 6,525,204)),
5-hydroxy-1-methyl-4-[3-(4,5-dihydroisoxazol-3-yl)-2-methyl-4-methylsulfonylbenzoyl]pyrazole (topramezone, WO 99/58509),
1-ethyl-5-hydroxy-3-methyl-4-[2-methyl-4-methylsulfonyl-3-(2-methoxyethylamino)benzoyl]pyrazole (WO 96/26206 (U.S. Pat. No. 5,846,907)),
3-cyclopropyl-5-hydroxy-1-methyl-4-[2-methyl-4-methylsulfonyl-3-(2-methoxy-ethylamino)benzoyl]pyrazole (WO 96/26206),
5-benzoxy-1-ethyl-4-[2-methyl-4-methylsulfonyl-3-(2-methoxyethylamino)benzoyl]pyrazole (WO 96/26206),
1-ethyl-5-hydroxy-4-(3-dimethylamino-2-methyl-4-methylsulfonylbenzoyl)pyrazole (WO 96/26206),
5-hydroxy-1-methyl-4-(2-chloro-3-dimethylamino-4-methylsulfonylbenzoyl)pyrazole (WO 96/26206),
1-ethyl-5-hydroxy-4-(3-allylamino-2-chloro-4-methylsulfonylbenzoyl)pyrazole (WO 96/26206),
1-ethyl-5-hydroxy-4-(2-methyl-4-methylsulfonyl-3-morpholinobenzoyl)pyrazole (WO 96/26206),
5-hydroxy-1-isopropyl-4-(2-chloro-4-methylsulfonyl-3-morpholinobenzoyl)pyrazole (WO 96/26206),
3-cyclopropyl-5-hydroxy-1-methyl-4-(2-chloro-4-methylsulfonyl-3-morpholinobenzoyl)pyrazole (WO 96/26206),
1,3-dimethyl-5-hydroxy-4-(2-chloro-4-methylsulfonyl-3-pyrazol-1-ylbenzoyl)pyrazole WO 96/26206),
1-ethyl-5-hydroxy-3-methyl-4-(2-chloro-4-methylsulfonyl-3-pyrazol-1-ylbenzoyl)pyrazole (WO 96/26206),
1-ethyl-5-hydroxy-4-(2-chloro-4-methylsulfonyl-3-pyrazol-1-ylbenzoyl)pyrazole (WO 96/26206),
(5-hydroxy-1-methyl-1H-pyrazol-4-yl)(3,3,4-trimethyl-1,1-dioxido-2,3-dihydro-1-benzothien-5-yl)methanone (US2002/0016262),
1-methyl-4-[(3,3,4-trimethyl-1,1-dioxido-2,3-dihydro-1-benzothien-5-yl)carbonyl]-1H-pyrazol-5-ylpropane-1-sulfonate (US2002/0016262, WO 2002/015695 (US 2002052296));
3-(2-chloro-4-mesylbenzoyl)-2-phenylthiobicyclo[3.2.1] oct-2-en-4-one (benzobicyclon);

K) sulfonylaminocarbonyltriazolinones, for example

4,5-dihydro-3-methoxy-4-methyl-5-oxo-N-(2-trifluoromethoxyphenylsulfonyl)-1H-1,2,4-triazole-1-carboxamide sodium salt (flucarbazone-sodium),
methyl 2-(4,5-dihydro-4-methyl-5-oxo-3-propoxy-1H-1,2,4-triazol-1-yl)carboxamido-sulfonylbenzoate sodium salt (propoxycarbazone-Na);
methyl 4-[(4,5-dihydro-3-methoxy-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)carbonyl-sulfamoyl]-5-methylthiophene-3-carboxylate (thiencarbazone-methyl);

L) triazolinones, for example

4-amino-N-ten-butyl-4,5-dihydro-3-isopropyl-5-oxo-1,2,4-1H-triazole-1-carboxamide (amicarbazone),
2-(2,4-dichloro-5-prop-2-ynyloxyphenyl)-5,6,7,8-tetrahydro-1,2,4-triazolo[4,3-a]pyridin-3(2H)-one (azafenidin),
ethyl (RS)-2-chloro-3-[2-chloro-5-(4-difluoromethyl-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl)-4-fluorophenyl]propionate (carfentrazone-ethyl),
2',4'-dichloro-5'-(4-difluoromethyl-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl)-methanesulfonanilide (sulfentrazone);
4-[4,5-dihydro-4-methyl-5-oxo-3-(trifluoromethyl)-1H-1,2,4-triazol-1-yl]-2-[(ethylsulfonyl)amino]-5-fluorobenzenecarbothioamide (bencarbazone);

M) phosphinic acids and derivatives, for example

4-[hydroxy(methyl)phosphinoyl]-L-homoalanyl-L-alanyl-L-alanine (bilanafos),
DL-homoalanin-4-yl(methyl)phosphinic acid ammonium salt (glufosinate-ammonium);

N) glycine derivatives, for example

N-(phosphonomethyl)glycine and its salts (glyphosate and salts, for example the sodium salt or the isopropylammonium salt),
N-(phosphonomethyl)glycine trimesium salt (sulfosate);

O) pyrimidinyloxypyridinecarboxylic acid derivatives; pyrimidinyloxybenzoic acid derivatives and pyrimidinylthiobenzoic acid derivatives, for example

benzyl 3-(4,6-dimethoxypyrimidin-2-yl)oxypyridine-2-carboxylate (EP-A 0 249 707 (U.S. Pat. No. 4,832,729)),

methyl 3-(4,6-dimethoxypyrimidin-2-yl)oxypyridine-2-carboxylate (EP-A 0 249 707),

1-(ethoxycarbonyloxyethyl) 2,6-bis[(4,6-dimethoxypyrimidin-2-yl)oxy]benzoate (EP-A 0 472 113 (U.S. Pat. No. 5,154,750)),

2,6-bis[(4,6-dimethoxypyrimidin-2-yl)oxy]benzoic acid (bispyribac-sodium),

isopropyl 4-[[[2-[(4,6-dimethoxy-2-pyrimidinyl)oxy]phenyl]methyl]amino]benzoate (pyribambenz-isopropyl, WO 2002034724 (U.S. Pat. No. 6,800,590)),

propyl 4-[[[2-[(4,6-dimethoxy-2-pyrimidinyl)oxy]phenyl]methyl]amino]benzoate (pyribambenz-propyl, WO 2002034724),

pyribenzoxim, pyriftalid, pyriminobac-methyl, pyrithiobac-sodium, pyrirmisulfan;

P) S—(N-aryl-N-alkylcarbamoylmethyl)dithiophosphonic acid esters, such as S—[N-(4-chlorophenyl)-N-isopropylcarbamoylmethyl]O,O-dimethyl dithiophosphate (anilophos);

Q) triazinones, for example

3-cyclohexyl-6-dimethylamino-1-methyl-1,3,5-triazine-2,4-(1H,3H)-dione (hexazinone),

4-amino-4,5-dihydro-3-methyl-6-phenyl-1,2,4-triazin-5-one (metamitron),

4-amino-6-tert-butyl-4,5-dihydro-3-methylthio-1,2,4-triazin-5-one (metribuzin);

R) pyridinecarboxylic acids, for example

aminopyralid, clopyralid, fluoroxypyr, picloram and triclopyr;

S) pyridines, for example

dithiopyr and thiazopyr;

T) pyridinecarboxamides, for example

diflufenican and picolinafen;

U) 1,3,5-triazines, for example

ametryn, atrazine, cyanazine, dimethametrin, prometon, prometryn, propazine, simazine, symetryn, terbumeton, terbuthylazine, terbutryn and trietazine;

V) plant growth regulators, for example

forchlorfenuron and thidiazuron;

W) ketoenoles, for example

8-(2,6-diethyl-p-tolyl)-1,2,4,5-tetrahydro-7-oxo-7H-pyrazolo[1,2-d][1,4,5]oxadiazepin-9-yl 2,2-dimethylpropionate (pinoxaden);

X) pyrazoles, for example

3-[5-(difluoromethoxy)-1-methyl-3-(trifluoromethyl)pyrazol-4-ylmethylsulfonyl]-4,5-dihydro-5,5-dimethyl-1,2-oxazole (pyroxasulfone).

The herbicides of groups A to W are known, for example, from the respective abovementioned publications and from "The Pesticide Manual", The British Crop Protection Council, 14th Edition, 2006, or the e-Pesticide Manual, Version 4.0, British Crop Protection Council 2006 or else from the "Compendium of Pesticide Common Names".

When used as active compound formulations or coformulations, they generally comprise, if appropriate, the respective customary tackifiers, wetting agents, dispersing agents, emulsifiers, penetrants, preservatives, antifreeze agents and solvents, fillers, carriers and colorants, antifoams, evaporation inhibitors and pH- and viscosity-modifying agents.

The compounds of the formula I and their combinations with one or more of the abovementioned pesticides can be formulated in various ways, depending on the prevailing physicochemical and biological parameters. Examples of suitable formulation types are:

- emulsifiable concentrates which are prepared by dissolving the active compounds in an organic solvent, for example butanol, cyclohexanone, dimethylformamide, xylene or else relatively high-boiling hydrocarbons or mixtures of the organic solvents with addition of one or more ionic and/or nonionic surfactants (emulsifiers). Suitable emulsifiers are, for example, calcium alkylarylsulfonates, fatty acid polyglycol esters, alkylaryl polyglycol ethers, fatty alcohol polyglycol ethers, propylene oxide/ethylene oxide condensates, alkyl polyethers, sorbitan esters and polyoxyethylenesorbitan fatty acid esters;
- dusts, which are obtained by grinding the active compounds with finely dispersed solid inorganic or organic substances, for example talc, natural clays, such as kaolin, bentonite and pyrophyllite, diatomaceous earth or meals;
- water- or oil-based suspension concentrates, which can be prepared, for example, by wet grinding using bead mills;
- water-soluble powders;
- water-soluble concentrates;
- granules, such as water-soluble granules, water-dispersible granules and granules for application by broadcasting and soil application;
- wettable powders which, in addition to active compound, also contain diluents or inert substances and surfactants;
- capsule suspensions and microcapsules;
- ultra-low-volume formulations.

The abovementioned formulation types are known to the person skilled in the art and described, for example, in: K. Martens, "Spray Drying Handbook", 3rd Ed., G. Goodwin Ltd., London, 1979; W. van Valkenburg, "Pesticide Formulations", Marcel Dekker, N.Y. 1973; Winnaker-Küchler, "Chemische Technologie" [Chemical Technology], volume 7, C. Hanser Verlag Munich, 4th edition 1986; "Perry's Chemical Engineer's Handbook", 5th Ed., McGraw-Hill, N.Y. 1973, pages 8-57.

The formulation auxiliaries required, such as inert materials, surfactants, solvents and other additives are also known and are described, for example, in: McCutcheon's "Detergents and Emulsifiers Annual", MC Publ. Corp., Ridgewood N.J.; C. Marsden, "Solvents Guide", 2nd Ed., Interscience, N.Y. 1963; H. von Olphen, "Introduction to Clay Colloid Chemistry", 2nd Ed., J. Wiley & Sons, N.Y.; Schönfeldt, "Grenzflächenaktive Äthylenoxidaddukte" [Surface-active ethylene oxide adducts], Wiss. Verlagsgesellschaft, Stuttgart 1976; Sisley and Wood, "Encyclopedia of Surface Active Agents", Chem. Publ. Co. Inc., N.Y. 1964; Watkins, "Handbook of Insecticide Dust Diluents and Carriers", 2nd Ed., Darland Books, Caldwell N.J.; Winnacker-Küchler, "Chemische Technologie" [Chemical Technology], volume 7, C. Hanser Verlag Munich, 4th edition 1986.

In addition to the abovementioned formulation auxiliaries, the useful-plant-protecting compositions may comprise, if appropriate, customary tackifiers, wetting agents, dispersants, penetrants, emulsifiers, preservatives, antifreeze agents, fillers, carriers, colorants, anti-foams, evaporation inhibitors and pH or viscosity regulators.

Depending on the formulation type, the useful-plant-protecting compositions generally comprise 0.1 to 99% by weight, in particular 0.2 to 95% by weight, of one or more safeners of the formula I or a combination of safener and pesticide. Furthermore, they comprise 1 to 99.9, in particular 4 to 99.5,% by weight of one or more solid or liquid additives and 0 to 25, in particular 0.1 to 25,% by weight of a surfactant.

In emulsifiable concentrates, the concentration of active compound, i.e. the concentration of safener and/or pesticide, is generally 1 to 90, in particular 5 to 80,% by weight. Dusts usually comprise 1 to 30, preferably 5 to 20,% by weight of active compound. In wettable powders, the concentration of active compound is generally 10 to 90% by weight. In water-dispersible granules, the content of active compound is, for example, between 1 and 95% by weight, preferably between 10 and 80% by weight.

For use, the formulations, which are present in commercially available form, are, if appropriate, diluted in a customary manner, for example in the case of wettable powders, emulsifiable concentrates, dispersions and water-dispersible granules, with water. Preparations in the form of dusts, granules and sprayable solutions are usually not diluted with any further inert substances prior to use. The required application rate of the safeners varies with the external conditions such as, inter alia, temperature, humidity and the type of herbicide used.

In the examples below, which illustrate the invention but do not limit it, the amounts are based on weight, unless defined otherwise.

EXAMPLES

1 Formulation Examples

1.1 Dusting Agent

A dusting agent is obtained by mixing 10 parts by weight of a compound of the formula (I) or of an active compound mixture of a pesticide (eg. herbicide) and a safener of the formula (I) and 90 parts by weight of talc as inert material and comminuting in a hammer mill.

1.2 Water-Dispersible Powder

A wettable powder which is readily dispersible in water is obtained by mixing 25 parts by weight of a compound of the formula (I) or of an active compound mixture of a pesticide (eg. herbicide) and a safener of the formula (I), 64 parts by weight of kaolin-containing quartz as inert material, 10 parts by weight of potassium ligninsulfonate and 1 part by weight of sodium oleoylmethyltaurinate as wetting and dispersing agent, and grinding in a pin mill.

1.3 Water-Dispersible Concentrate

A dispersion concentrate which is readily dispersible in water is obtained by mixing 20 parts by weight of a compound of the formula (I) or of an active compound mixture of a pesticide (eg. herbicide) and a safener of the formula (I) with 6 parts by weight of alkylphenol polyglycol ether (®Triton X 207), 3 parts by weight of isotridecanol polyglycol ether and 71 parts by weight of paraffinic mineral oil and grinding in a ball mill to a fineness of below 5 microns.

1.4 Emulsifiable Concentrate

An emulsifiable concentrate is obtained from 15 parts by weight of a compound of the formula (I) or of an active compound mixture of a pesticide (eg. herbicide) and a safener of the formula (I), 75 parts by weight of cyclohexanone as solvent and 10 parts by weight of ethoxylated nonylphenol as emulsifier.

1.5 Water-Dispersible Granules

Water-dispersible granules are obtained by mixing

75 parts by weight	of a safener of the formula (I) or of a mixture of a pesticide and a safener of the formula (I),
10 parts by weight	of calcium ligninsulfonate,
5 parts by weight	of sodium lauryl sulfate,
3 parts by weight	of polyvinyl alcohol and
7 parts by weight	of kaolin,

grinding in a pin mill and granulating the powder in a fluidized bed by spraying on water as granulation liquid.

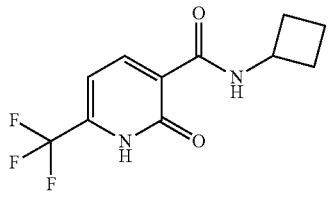
Water-dispersible granules are also obtained by homogenizing

25 parts by weight	of a safener of the formula (I) or of a mixture of a pesticide and a safener of the formula (I),
5 parts by weight	of sodium 2,2'-dinaphthylmethane-6,6'-disulfonate,
2 parts by weight	of sodium oleoylmethyltaurinate,
17 parts by weight	of calcium carbonate,
50 parts by weight	of water and
1 part by weight	of polyvinyl alcohol

in a colloid mill, comminuting, then grinding in a bead mill and atomizing and drying the resulting suspension in a spray tower using a single-fluid nozzle.

2. Preparation Examples

Example A1



N-Cyclobutyl-2-oxo-6 (trifluoromethyl)-1,2-dihydropyridine-3-carboxamide

A1.1) 4-Butoxy-1,1,1-trifluorobut-3-en-2-one

At 5° C., 79.9 g (0.38 mol) of trifluoroacetic anhydride—dissolved in 100 ml of trichloromethane—were added with stirring to a mixture of 29.9 g (0.38 mol) of pyridine and 50.0 g (0.38 mol) of butyl vinyl ether in 200 ml of trichloromethane. After the addition, stirring was continued at room temperature for another 15 h. 300 ml of water were then added to the mixture, and the organic phase was separated off, dried and concentrated. This gave 59 g (79% of theory) of a yellowish oil.

^{1}H-NMR: [$CDCl_3$] 0.96 (t, 3H); 1.41 (m, 2H); 1.73 (m, 2H); 4.04 (t, 2H); 5.85 (d, 1H); 7.90 (d, 1H).

A1.2) Methyl 2-oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxylate

2.15 g (94 mmol) of sodium were dissolved in 300 ml of methanol, 15.3 g (78 mmol) of 4-butoxy-1,1,1-trifluorobut-3-en-2-one and 9.13 g (78 mmol) of methyl malonatemonoamide were added and the mixture was heated under reflux for 18 h. The mixture was concentrated, and the residue was taken up in water and washed with dichloromethane. The aqueous phase was then adjusted to pH 2 by addition of 2N

hydrochloric acid and extracted with dichloromethane. Drying and concentration of the extract gave 12 g (69% of theory) of a colorless powder.

^{1}H-NMR: [$CDCl_3$] 4.03 (s, 3H); 7.31 (d, 1H); 8.39 (d, 1H).

A1.3) 2-Oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxylic acid

At room temperature, 4.73 g (21.4 mmol) of methyl 2-oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxylate were dissolved in 45 ml of methanol and 15 ml of water, 1.80 g (42.8 mmol) of lithium hydroxide monohydrate were added and the mixture was then heated under reflux for 2 h. The mixture was concentrated to about 15 ml and then washed with dichloromethane and the aqueous phase was adjusted to pH 2 by addition of 2N hydrochloric acid. The mixture was again extracted with dichloromethane, and the organic phase was dried and concentrated. This gave 4.2 g (94% of theory) of a colorless powder.

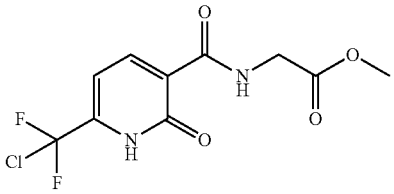
^{1}H-NMR: [DMSO] 7.41 (d, 1H); 8.35 (d, 1H).

A1.4) N-Cyclobutyl-2-oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxamide

600 mg (2.9 mmol) of 2-oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxylic acid were dissolved in 5 ml of tetrahydrofuran, 658 mg (4.1 mmol) of N,N-carbonyldiimidazole were added and the mixture was heated initially at room temperature for 30 min and then under reflux for 30 min. A solution of 247 mg (3.5 mmol) of cyclobutylamine in 5 ml tetrahydrofuran was then added dropwise, and the mixture was heated under reflux for a further 2 h. The solution was evaporated to dryness and then taken up in ethyl acetate, washed with 1 N hydrochloric acid and water, dried and concentrated. Purification by column chromatography gave 160 mg (19% of theory) of a light-brown powder.

^{1}H-NMR: [$CDCl_3$] 1.80 (m, 2H); 2.00 (m, 2H); 2.42 (m, 2H); 4.55 (m, 1H); 6.88 (d, 1H); 8.65 (d, 1H); 9.50 (br, 1H).

Example A2



6-[Chloro(difluoro)methyl]-N-(2-methoxyethyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

A2.1) 4-Butoxy-1-chloro-1,1-difluorobut-3-en-2-one

Under stirring at 5° C., 5.0 g (20.2 mmol) of chlorodifluoroacetic anhydride—dissolved in 10 ml of trichloromethane—were added to a mixture of 1.60 g (20.2 mmol) of pyridine and 2.1 g (20.2 mmol) of butyl vinyl ether in 30 ml of trichloromethane. After the addition, stirring was continued at room temperature for another 15 h. 100 ml of water were then added to the mixture, and the organic phase was separated off, dried and concentrated. This gave 3.4 g (80% of theory) of a yellowish oil.

^{1}H-NMR: [DMSO] 0.90 (t, 3H); 1.35 (m, 2H); 1.65 (m, 2H); 4.20 (t, 2H); 6.04 (d, 1H); 8.10 (d, 1H).

A2.2) Methyl 6-[chloro(difluoro)methyl]-2-oxo-1,2-dihydropyridine-3-carboxylate

1.47 g (61 mmol) of sodium were dissolved in 220 ml of methanol, 10 g (47 mmol) of 4-butoxy-1-chloro-1,1-difluorobut-3-en-2-one and 5.51 g (47 mmol) of methyl malonatemonoamide were added and the mixture was heated under reflux for 21 h. The pH was adjusted to 4-5 by addition of 2N hydrochloric acid, and about 200 ml were then distilled off. The solution that remained was extracted with ethyl acetate, and the extract was dried and concentrated. The residue was triturated with diisopropyl ether, filtered off with suction and dried. This gave 7.4 g (66% of theory) of a colorless powder.

^{1}H-NMR: [$CDCl_3$] 4.01 (s, 3H); 7.30 (d, 1H); 8.38 (d, 1H); 11.5 (br, 1H).

A2.3a) 6-[Chloro(difluoro)methyl]-2-oxo-1,2-dihydropyridine-3-carboxylic acid

1.70 g (74 mmol) of sodium were dissolved in 250 ml of methanol, 13.1 g (61.7 mmol) of 4-butoxy-1-chloro-1,1-difluorobut-3-en-2-one and 7.22 g (61.7 mmol) of methyl malonatemonoamide were added and the mixture was heated under reflux for 21 h. 250 ml of water and 2.9 g (67.9 mmol) of lithium hydroxide monohydrate were then added, and heating under reflux was continued for a further 2 h. The mixture was concentrated to about 200 ml and washed with dichloromethane, and the aqueous phase was acidified with 2N hydrochloric acid to pH 2. The precipitated solid was filtered off with suction and dried under reduced pressure. 9.3 g (68% of theory).

A2.3b) 6-[Chloro(difluoro)methyl]-2-oxo-1,2-dihydropyridine-3-carboxylic acid

11.0 g (49.4 mmol) of 6-[chloro(difluoro)methyl]-2-oxo-1,2-dihydropyridine-3-carboxamide were heated in 77 ml of 50% strength sulfuric acid. The mixture was then added to ice water, and the precipitate was filtered off with suction and dried. This gave 7.2 g (65% of theory) of a yellowish powder.

m.p.: 145-147° C.

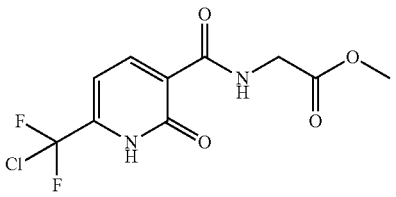
^{1}H-NMR: [DMSO] 7.36 (d, 1H); 8.34 (d, 1H).

A2.4) 6-[Chloro(difluoro)methyl]-N-(2-methoxyethyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

500 mg (2.2 mmol) of 6-[chloro(difluoro)methyl]-2-oxo-1,2-dihydropyridine-3-carboxylic acid were dissolved in 10 ml of tetrahydrofuran, 508 mg (3.1 mmol) of N,N-carbonyldiimidazole were added and the mixture was then stirred initially at room temperature for 30 min and then under reflux for min. A solution of 202 mg (2.7 mmol) of 2-methoxyethylamine in 2 ml of tetrahydrofuran was then added dropwise, and the mixture was heated under reflux for a further 2 h. The solution was evaporated to dryness, the residue was taken up in ethyl acetate and the solution was washed with 1N hydrochloric acid and water, dried and concentrated. This gave 360 mg (54% of theory) of a light-brown powder.

^{1}H-NMR: [$CDCl_3$] 3.40 (s, 3H); 3.58 (m, 2H); 3.67 (m, 2H); 6.84 (d, 1H), 8.62 (d, 1H); 9.40 (br, 1H).

Example A3

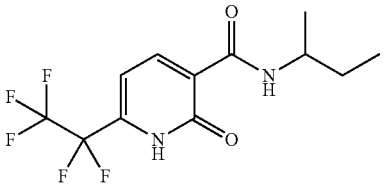


Methyl N-({6-[chloro(difluoro)methyl]2 oxo-1,2-dihydropyridin-3-yl}carbonyl)glycinate

300 mg (1.34 mmol) of 6-[chloro(difluoro)methyl]-2-oxo-1,2-dihydropyridine-3-carboxylic acid were dissolved in 5 ml of tetrahydrofuran, 435 mg (2.68 mmol) of N,N-carbonyldiimidazole were added and the mixture was stirred initially at room temperature for 30 min and then under reflux for 30 min. A mixture of 168 mg (1.34 mmol) of glycine methyl ester hydrochloride in 3 ml of tetrahydrofuran was then added, and the mixture was heated under reflux for a further 2 h. The solution was evaporated to dryness, the residue was taken up in ethyl acetate and the solution was washed with 1N hydrochloric acid and water, dried and concentrated. This gave 92 mg (23% of theory) of a light-brown powder.

^{1}H-NMR: [DMSO] 3.65 (s, 3H); 4.12 (d, 2H); 7.28 (d, br, 1H); 8.42 (d, 1H); 9.25 (t, br, 1H), 13.6 (br, 1H)

Example A4



N-(1-Methylpropyl)-2-oxo-6 (pentafluoroethyl)-1,2-dihydropyridine-3-carboxamide

A4.1)
1-Butoxy-4,4,5,5,5-pentafluoropent-1-en-3-one

With stirring at −10° C., 17.0 g (93.2 mmol) of pentafluoropropionyl chloride—dissolved in 20 ml of dichloromethane—were added to a mixture of 8.11 g (102 mmol) pyridine and 9.33 g (93.2 mmol) of butyl vinyl ether in 200 ml of dichloromethane. After the addition, stirring was continued at room temperature for a further 15 h. 200 ml of water were then added to the mixture, and the organic phase was separated off, dried and concentrated. This gave 18.9 g (82% of theory) of a yellowish oil.

^{1}H-NMR: [DMSO] 0.85 (t, 3H); 1.32 (m, 2H); 1.63 (m, 2H); 4.20 (t, 2H); 6.06 (d, 1H); 8.11 (d, 1H).

A4.2) Ethyl 2-oxo-6-(pentafluoroethyl)-1,2-dihydropyridine-3-carboxylate

0.56 g (24.4 mmol) of sodium was dissolved in 150 ml of ethanol, 5 g (20.3 mmol) of 1-butoxy-4,4,5,5,5-pentafluoropent-1-en-3-one and 2.66 g (20.3 mmol) of methyl malonatemonoamide were added and the mixture was heated under reflux for 6 h. The mixture was concentrated to about 50 ml, 500 ml of 1N hydrochloric acid were added and the mixture was then extracted with ethyl acetate. Drying and concentration gave 2.3 g (40% of theory) of a yellowish resin.

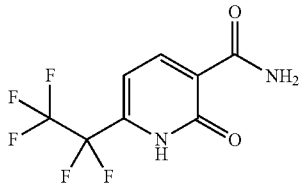
^{1}H-NMR: [$CDCl_3$] 1.45 (t, 3H); 4.50 (q, 2H); 7.35 (d, 1H); 8.40 (d, 1H); 11.4 (br, 1H).

A4.3) N-(1-Methylpropyl)-2-oxo-6-(pentafluoroethyl)-1,2-dihydropyridine-3-carboxamide

At room temperature, 160 mg (0.56 mmol) of ethyl 2-oxo-6-(pentafluoroethyl)-1,2-dihydropyridine-3-carboxylate were stirred in 5 ml of 2-butylamine for 14 h. The pH was then adjusted to 2 by addition of 1N hydrochloric acid, which resulted in the precipitation of a colorless solid. Filtration with suction and drying gave 160 mg (91% of theory) of the product.

^{1}H-NMR: [$CDCl_3$] 0.97 (t, 3H); 1.22 (d, 3H); 1.59 (m, 2H); 4.10 (m, 1H); 6.88 (d, 1H); 8.72 (d, 1H); 9.24 (d, br, 1H); 13.6 (br).

Example A5

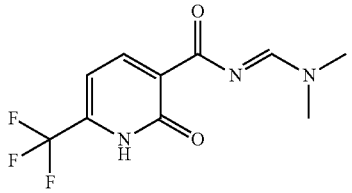


2-Oxo-6-(pentafluoroethyl)-1,2-dihydropyridine-3-carboxamide

0.22 g (9.7 mmol) of sodium was dissolved in 50 ml of ethanol, 2 g (8.1 mmol) of 1-butoxy-4,4,5,5,5-pentafluoropent-1-en-3-one and 0.86 g (8.1 mmol) malonamide were added and the mixture was heated under reflux for 7 h. The mixture was concentrated, and 1N hydrochloric acid was added. The resulting precipitate was filtered off with suction and dried. This gave 1.9 g (94% of theory) of a yellow powder.

^{1}H-NMR: [DMSO] 7.45 (d, 1H); 8.15 (br, 1H); 8.45 (br, 1H); 8.50 (d, 1H); 13.7 (br, 1H).

Example A6



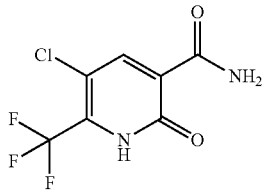
N-[(Dimethylamino)methylene]-2-oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxamide

0.87 g (7.28 mmol) of N,N-dimethylformamide dimethyl acetal was added to 1.00 g (4.85 mmol) of 2-oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxamide in 5 ml of toluene, and the mixture was heated under reflux for 4 h. After cooling, the resulting precipitate was filtered off with suction and dried: 0.5 g (39% of theory).

^{1}H-NMR: [$CDCl_3$] 3.25 (s, 3H); 3.35 (3. 3H); 7.25 (d, 1H); 8.58 (d, 1H); 8.76 (s, 1H)

^{13}C-NMR. [$CDCl_3$] 35 (NMe_2); 106 (C-5); 115 (C-3); 122 (q, CF_3); 143 (C-4); 151 (C-6); 164 (N═CN); 167 (C-2); 171 (CON).

Example A7



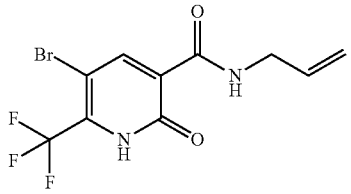
5-Chloro-2-oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxamide

At room temperature, 0.39 g (2.9 mmol) of sulfuryl chloride was added to 300 mg (1.46 mmol) of 2-oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxamide in 5 ml of 1,2-dichloroethane and 2.3 g (0.25 ml) of pyridine, and the mixture was then heated under reflux for 2 h. The mixture was then added to 0.5N hydrochloric acid. The organic phase was removed and then dried and concentrated, which gave 144 mg (41% of theory) of a brownish powder.

^{1}H-NMR: [DMSO] 8.25 (br, 1H); 8.35 (br, 1H); 8.50 (s, 1H); 13.8 (br, 1H)

^{13}C-NMR. [DMSO] 118 (C-5); 120 (C-6); 120.5 (q, CF_3); 144 (C-4), 161 (C-2); 166 ($COONH_2$).

Example A8



N-Allyl-5-bromo-2-oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxamide

A8.1) Methyl 5-bromo-2-oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxylate

At room temperature, 0.36 g (2.04 mmol) of N-bromosuccinimide was added to a suspension of 0.3 g (1.36 mmol) of methyl 2-oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxylate in 10 ml of glacial acetic acid, and the mixture was then heated under reflux for 2 days. The reaction mixture was then added to water and extracted with dichloromethane. The extract was concentrated, and the residue was purified further by preparative HPLC. This gave 227 mg (56% of theory) of a colorless powder.

^{1}H-NMR: [DMSO] 3.85 (s, 3H); 8.45 (s, 1H); 12.80 (br, 1H);

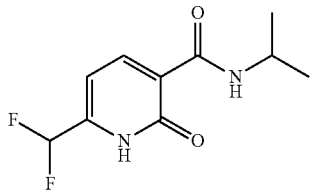
^{13}C-NMR. [DMSO] 53 (OCH_3); 105 (C-3); 148 (C-4), 161 (C-2); 164 (COOMe).

A8.2) N-Allyl-5-bromo-2-oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxamide

At room temperature, 250 mg (0.83 mmol) of methyl 5-bromo-2-oxo-6-(trifluoromethyl)-1,2-dihydropyridine-3-carboxylate were stirred in 5 ml of allylamine for 18 h. By addition of 2N hydrochloric acid, the pH was then adjusted to 2, resulting in the precipitation of a colorless solid. Filtration with suction and drying gave 134 mg (50% of theory) of the product.

^{1}H-NMR: [DMSO] 3.94 (t, 2H); 5.18 (dd, 2H); 5.89 (m, 1H); 8.52 (s, 1H); 8.85 (t, br, 1H).

Example A9



6-Difluoromethyl-N-isopropyl-2-oxo-1,2-dihydropyridine-3-carboxamide

A9.1) 4-Butoxy-1,1-difluorobut-3-en-2-one

With stirring at 5° C., 10.0 g (55.7 mmol) of difluoroacetic anhydride were added to a mixture of 4.41 g (4.5 ml, 55.7 mmol) of pyridine and 5.7 g (55.7 mmol) butyl vinyl ether in 330 ml of trichloromethane. After the addition, stirring was continued at room temperature for a further 15 h. 300 ml of water were then added to the mixture, and the organic phase was separated off, dried and concentrated. This gave 5.7 g (57% of theory) of a yellowish oil.

^{1}H-NMR: [$CDCl_3$] 0.95 (t, 3H); 1.42 (m, 2H); 1.72 (m, 2H); 4.00 (t, 2H); 5.78 (t, 1H); 5.90 (d, 1H); 7.85 (d, 1H).

A9.2) Methyl 6-(difluoromethyl)-2-oxo-1,2-dihydropyridine-3-carboxylate

1.21 g (52.9 mmol) of sodium were dissolved in 200 ml of methanol, 7.9 g (44 mmol) of 4-butoxy-1,1-difluorobut-3-en-2-one and 5.3 g (44 mmol) of methyl malonatemonoamide were then added and the mixture was heated under reflux for 15 h. The mixture was concentrated and the residue was then triturated with 100 ml of 1N hydrochloric acid. The solid obtained was filtered off with suction and dried: 7.4 g (82% of theory).

^{1}H-NMR: [DMSO] 3.82 (s, 3H); 6.85 (t, 1H); 7.02 (d, br, 1H); 8.20 (d, 1H); 12.4 (br, 1H).

A9.3) 6-(Difluoromethyl)-2-oxo-1,2-dihydropyridine-3-carboxylic acid

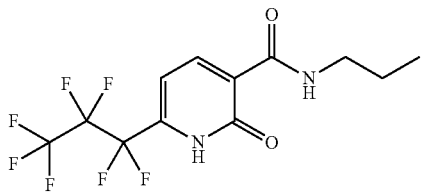
7.4 g (36.4 mmol) of methyl 6-(difluoromethyl)-2-oxo-1,2-dihydropyridine-3-carboxylate were dissolved in 100 ml of methanol, and a solution of 1.3 g (54.6 mmol) of lithium hydroxide in 50 ml of water was added. After two hours of heating under reflux, the mixture was concentrated to a volume of about 50 ml and the solution was washed with dichloromethane. The aqueous phase was then acidified with 2N hydrochloric acid and extracted with ethyl acetate. Drying and concentration of the extract gave 5.6 g (82% of theory) of a brownish powder.

A9.4) 6-(Difluoromethyl)-N-isopropyl-2-oxo-1,2-dihydropyridine-3-carboxamide

After dissolution of 200 mg (1.1 mmol) of 6-(difluoromethyl)-2-oxo-1,2-dihydropyridine-3-carboxylic acid in 25 ml of tetrahydrofuran and addition of 206 mg (1.3 mmol) of N,N-carbonyldiimidazole, the mixture was stirred initially at room temperature for 30 min and then under reflux for 30 min. A solution of 66 mg (1.1 mmol) of isopropylamine in 5 ml of tetrahydrofuran was then added dropwise, and the mixture was heated under reflux for a further 2 h. The solution was evaporated to dryness, the residue was then taken up in ethyl acetate and the mixture was washed with 2N hydrochloric acid and water, dried and concentrated. Purification by column chromatography gave 150 mg (61% of theory) of a colorless powder.

^{1}H-NMR: [$CDCl_3$] 1.25 (d, 6H); 4.22 (m, 1H); 6.55 (t, 1H); 6.69 (d, 1H); 8.64 (d, 1H); 9.42 (d, br, 1H); 13.0 (br, 1H).

Example A10



6-(Heptafluoropropyl)-2-oxo-N-propyl-1,2-dihydropyridine-3-carboxamide

A10.1) 1-Butoxy-4,4,5,5,6,6,6-heptafluorohex-1-en-3-one

With stirring and at −10° C., 21.7 g (93.2 mmol) of heptafluorobutyryl chloride—dissolved in 50 ml of dichloromethane—were added to a mixture of 8.11 g (102 mmol) of pyridine and 9.33 g (93.2 mmol) of butyl vinyl ether in 200 ml of dichloromethane. After the addition, stirring was continued at room temperature for another 15 h. 300 ml of water were then added to the mixture, and the organic phase was separated off, dried and concentrated.

This gave 28.2 g (82% of theory) of a yellowish oil which was reacted further without further purification.

^{1}H-NMR: [$CDCl_3$] 0.96 (t, 3H); 1.40 (m, 2H); 1.75 (m, 2H); 4.04 (t, 2H); 5.95 (d, 1H); 7.93 (d, 1H).

A10.2) Methyl 6-(heptafluoropropyl)-2-oxo-1,2-dihydropyridine-3-carboxylate

After dissolution of 2.63 g (114 mmol) of sodium in 250 ml of methanol, 28.2 g (95.5 mmol) of 1-butoxy-4,4,5,5,6,6,6-heptafluorohex-1-en-3-one and 11.18 g (95.5 mmol) of methyl malonatemonoamide were added, and the mixture was heated under reflux for 18 h. The mixture was concentrated and the residue was then taken up in water and washed with dichloromethane. The aqueous phase was then adjusted to pH 2 by addition of 2N hydrochloric acid and extracted with dichloromethane, Drying, concentration and purification of the extract by column chromatography gave 15.2 g (49% of theory) of a yellow powder.

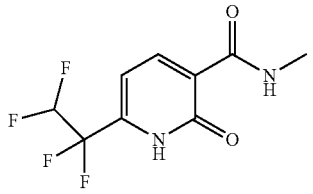
^{1}H-NMR: [$CDCl_3$] 4.06 (s, 3H); 7.35 (d, 1H); 8.40 (d, 1H); 11.4 (br, 1H).

A10.3) 6-(Heptafluoropropyl) 2 oxo-N-propyl-1,2-dihydropyridine-3-carboxamide

250 mg (0.78 mmol) of methyl 6-(heptafluoropropyl)-2-oxo-1,2-dihydropyridine-3-carboxylate in 5 ml of propylamine were heated under reflux for 5 h. The mixture was then adjusted to pH 2 by addition of 1N hydrochloric acid and extracted with dichloromethane. Drying and concentration gave 240 mg (88% of theory) of a beige powder.

^{1}H-NMR: [DMSO] 0.90 (t, 3H); 1.54 (m, 2H); 3.25 (q, 2H); 7.41 (d, 1H); 8.40 (d, 1H); 8.85 (br, 1H); 13.45 (br, 1H).

Example A11



N-Methyl-2-oxo-6-(1,1,2,2-tetrafluoroethyl)-1,2-dihydropyridine-3-carboxamide

A11.1) 1-Butoxy-4,4,5,5-tetrafluoropent-1-en-3-one

With stirring and at 0° C., 25.0 g (152 mmol) of 3H-tetrafluoropropionyl chloride—dissolved in 20 ml dichloromethane—were added to a mixture of 14.4 g (182 mmol) of pyridine and 15.2 g (152 mmol) of butyl vinyl ether in 250 ml of dichloromethane. After the addition, stirring was continued at room temperature for another 15 h. 250 ml of water were then added to the mixture, and the organic phase was separated off, dried and concentrated. This gave 12.5 g (36% of theory) of a yellowish oil.

^{1}H-NMR: [$CDCl_3$] 0.96 (t, 3H); 1.46 (m, 2H); 1.75 (m, 2H); 4.03 (t, 2H); 6.00 (d, 1H); 6.09 (tt, 1H); 7.90 (d, 1H).

A11.2) Methyl 2-oxo-6-(1,1,2,2-tetrafluoroethyl)-1,2-dihydropyridine-3-carboxylate

After dissolution of 1.39 g (60.3 mmol) of sodium in 500 ml of methanol, 11.5 g (50.3 mmol) of 1-butoxy-4,4,5,5-tetrafluoropent-1-en-3-one and 6.07 g (50.3 mmol) of methyl malonatemonoamide were added, and the mixture was heated

under reflux for 6 h. The mixture was concentrated to about 100 ml, 500 ml of 1N hydrochloric acid were then added and the mixture was subsequently extracted with ethyl acetate. Drying and concentration gave 10.3 g (67% of theory) of a yellowish resin.

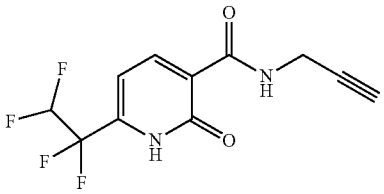
^{1}H-NMR: [$CDCl_3$] 4.03 (s, 3H); 6.40 (tt, 1H); 7.38 (d, 1H); 8.39 (d, 1H).

A11.3) N-Methyl-2-oxo-6-(1,1,2,2-tetrafluoroethyl)-1,2-dihydropyridine-3-carb oxamide

At room temperature, 300 mg (1.19 mmol) of methyl 2-oxo-6-(1,1,2,2-tetrafluoroethyl)-1,2-dihydropyridine-3-carboxylate were stirred in 3.3 ml of a 40% strength aqueous methylamine solution for 14 h. The pH was then adjusted to 2 by addition of 1N hydrochloric acid, and the mixture was extracted with dichloromethane. Drying and concentration of the extract gave 230 mg (77% of theory) of the product.

^{1}H-NMR: [DMSO] 2.83 (d, 3H); 6.81 (tt, 1H); 7.22 (br, 1H); 8.41 (d, 1H); 9.00 (br, 1H); 13.4 (br, 1H).

Example A12

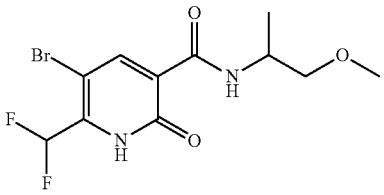


2-Oxo-N-(2-propynyl)-6-(1,1,2,2-tetrafluoroethyl)-1,2-dihydropyridine-3-carboxamide

At room temperature, 300 mg (1.19 mmol) of methyl 2-oxo-6-(1,1,2,2-tetrafluoroethyl)-1,2-dihydropyridine-3-carboxylate were stirred in 3.3 ml (41 mmol) of propargylamine for 14 h. The pH was then adjusted to 2 by addition of 1N hydrochloric acid, and the mixture was extracted with dichloromethane. Drying and concentration of the extract gave 280 mg (85% of theory) of the product.

^{1}H-NMR: [DMSO] 3.15 (t, 1H); 4.13 (m, 2H); 6.82 (tt, 1H); 7.18 (br, 1H); 8.41 (d, 1H); 9.35 (br, 1H); 13.3 (br, 1H).

Example A13



5-Bromo-6-(difluoromethyl)-N-(2-methoxy-1-methylethyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

A13.1) Methyl 5-bromo-6-(difluoromethyl)-2-oxo-1,2-dihydropyridine-3-carboxylate

4.1 g (20 mmol) of methyl 6-(difluoromethyl)-2-oxo-1,2-dihydropyridine-3-carboxylate were dissolved in 20 ml of N,N-dimethylformamide, and 5.35 g (30 mmol) of N-bromosuccinimide were added at room temperature. After 2 hours of stirring, the reaction mixture was added to water and extracted with tert-butyl methyl ether. The extract was subsequently washed repeatedly with water. Drying and concentration finally gave 3.7 g (65% of theory) of the product.

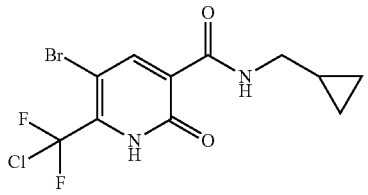
^{1}H-NMR: [DMSO] 3.83 (s, 3H); 7.07 (t, 1H); 8.34 (s, 1H); 12.5 (s, br, 1H).

A13.2) 5-Bromo-6-(difluoromethyl)-N-(2-methoxymethylethyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

At room temperature, 334 mg (1.19 mmol) of methyl 5-bromo-6-(difluoromethyl)-2-oxo-1,2-dihydropyridine-3-carboxylate in 3.3 ml (41 mmol) of 2-amino-1-methoxypropane were stirred for 14 h. The pH was then adjusted to 2 by addition of 1N hydrochloric acid, and the mixture was extracted with dichloromethane. Drying and concentration of the extract gave 360 mg (89% of theory) of the product.

^{1}H-NMR: [CDCl3] 1.27 (d, 3H); 3.40 (s, 3H); 3.43 (m, 2H); 4.37 (m, 1H); 6.85 (t, 1H); 8.68 (s, 1H); 9.42 (d, br, 1H); 12.7 (br, 1H).

Example A14



5-Bromo-6-[chloro(difluoro)methyl]-N-(cyclopropylmethyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

A14.1) Methyl 5-bromo-6-[chloro(difluoro)methyl]-2-oxo-1,2-dihydropyridine-3-carboxylate

1.30 g (5.47 mmol) of methyl 6-[chloro(difluoro)methyl]-2-oxo-1,2-dihydropyridinecarboxylate were dissolved in 50 ml of N,N-dimethylformamide, and 1.46 g (8.21 mmol) of N-bromosuccinimide were added at room temperature. After 3 hours of stirring, the reaction mixture was added to water, resulting in the formation of a colorless precipitate. Drying and concentration gave 1.23 g (71% of theory) of the product.

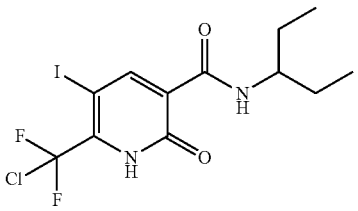
^{1}H-NMR: [DMSO] 3.85 (s, 3H); 8.45 (s, 1H); 12.7 (s, br, 1H).

A14.2) 5-Bromo-6-[chloro(difluoro)methyl]-N-(cyclopropylmethyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

At room temperature, 350 mg (1.11 mmol) of methyl 5-bromo-6-[chloro(difluoro)methyl]-2-oxo-1,2-dihydropyridine-3-carboxylate were dissolved in 5 ml of acetonitrile and stirred with 0.5 ml of aminomethylcyclopropane for 12 h. The reaction mixture was then added to 1N hydrochloric acid, and the resulting precipitate was filtered off with suction. The precipitate was dried, again triturated with 1N hydrochloric acid, filtered off with suction and washed with water. Drying gave 240 mg (62% of theory) of the product.

^{1}H-NMR: [DMSO] 0.25 (m, 2H); 0.46 (m, 2H); 1.04 (m, 1H); 3.20 (t, 2H); 8.55 (s, 1H); 8.82 (t, br, 1H); 13.6 (br, 1H).

Example A15



6-[Chloro(difluoro)methyl]-N-(1-ethylpropyl)-5-iodo-2-oxo-1,2-dihydropyridine-3-carboxamide

A15.1) Methyl 6-[chloro(difluoro)methyl]-5-iodo-2-oxo-1,2-dihydropyridine-3-carboxylate

10.0 g (42.1 mmol) of methyl 6-[chloro(difluoro)methyl]-2-oxo-1,2-dihydropyridinecarboxylate were dissolved in 50 ml of N,N-dimethylformamide, and 6.32 g (63.1 mmol) of calcium carbonate and 20.5 g (126 mmol) of iodine chloride were added at room temperature. After 6 hours of stirring at 50° C., the reaction mixture was added to water, resulting in the formation of a colorless precipitate, which was washed with dilute sodium bisulfite solution and water. Filtration with suction and drying gave 13.6 g (89% of theory) of the product.

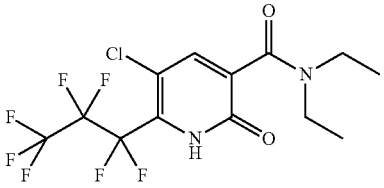
^{1}H-NMR: [DMSO] 3.84 (s, 3H); 8.61 (s, 1H); 12.6 (s, br, 1H).

A15.2) 6-[Chloro(difluoro)methyl]-N-(1-ethylpropyl)-5-iodo-2-oxo-1,2-dihydropyridine-3-carboxamide

At room temperature, 400 mg (1.1 mmol) of methyl 6-[chloro(difluoro)methyl]-5-iodo-2-oxo-1,2-dihydropyridine-3-carboxylate were dissolved in 5 ml of acetonitrile and stirred with 0.5 ml of 3-pentylamine for 12 h. The reaction mixture was then added to 1N of hydrochloric acid, and the resulting precipitate was filtered off with suction and washed with water. Drying gave 370 mg (72% of theory) of the product.

^{1}H-NMR: [DMSO] 0.87 (t, 6H); 1.43 (m, 21H); 1.55 (m, 2H); 3.78 (m, 1H); 8.55 (br, 1H); 8.67 (s, 1H); 13.5 (br, 1H).

Example A16



5-Chloro-N,N-diethyl-6-(heptafluoropropyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

A16.1) Methyl 5-chloro-6-(heptafluoropropyl)-2-oxo-1,2-dihydropyridine-3-carboxylate

16.7 g (52 mmol) of methyl 6-(heptafluoropropyl)-2-oxo-1,2-dihydropyridine-3-carboxylate were dissolved in 160 ml of N,N-dimethylformamide, and 7.08 g (52 mmol) of N-chlorosuccinimide were added at room temperature. After 3 hours of stirring at 50° C., the reaction mixture was added to water and extracted repeatedly with ethyl acetate. The organic phase was then separated off, washed with water and dried. The resulting crude product was then purified by preparative RP-HPLC. This gave 10.1 g (54% of theory) of the product as a colorless powder.

^{1}H-NMR: [DMSO] 3.85 (s, 3H); 8.35 (s, 1H); 12.8 (s, br, 1H).

A16.2) 5-Chloro-6-(heptafluoropropyl)-2-oxo-1,2-dihydropyridine-3-carboxylic acid

1.54 g (4.33 mmol) of methyl 5-chloro-6-(heptafluoropropyl)-2-oxo-1,2-dihydropyridine-3-carboxylate were dissolved in 23 ml of methanol, and a solution of 0.16 g (6.5 mmol) of lithium hydroxide in 13 ml of water was added. After two hours of heating under reflux, the methanol was distilled off, and the aqueous solution that remained was washed with dichloromethane. The aqueous phase was then acidified with 2N hydrochloric acid and extracted with dichloromethane. Drying and concentration of the extract gave 1.45 g (98% o of theory) of a brownish powder.

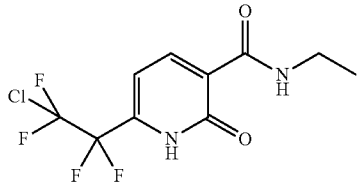
^{1}H-NMR: [DMSO] 8.30 (s, 1H).

A16.3) 5-Chloro-N,N-diethyl-6-(heptafluoropropyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

After dissolution of 355 mg (1.04 mmol) of 5-chloro-6-(heptafluoropropyl)-2-oxo-1,2-dihydropyridine-3-carboxylic acid in 30 ml tetrahydrofuran and addition of 337 mg (2.08 mmol) of N,N-carbonyldiimidazole, the mixture was stirred initially at room temperature for 30 min and then under reflux for 30 min. 152 mg (0.22 ml, 2.08 mmol) of diethylamine were then added, and the mixture was heated under reflux for a further 2 h. The solution was evaporated to dryness and then taken up in dichloromethane, washed with 1N hydrochloric acid and water, dried and concentrated. This gave 300 mg (72% of theory) of the product.

^{1}H-NMR: [DMSO] 1.03 (t, 3H); 1.15 (t, 3H); 3.12 (q, 2H); 3.45 (q, 2H); 8.05 (s, 1H); 12.5 (br, 1H).

Example A17



6-(2-Chloro-1,1,2,2-tetrafluoroethyl)-N-ethyl-2-oxo-1,2-dihydropyridine-3-carboxamide

A17.1) 1-Butoxy-5-chloro-4,4,5,5-tetrafluoropent-1-en-3-one

With stirring and at 0° C., 10.0 g (50.2 mmol) of 3-chlorotetrafluoropropionyl chloride—dissolved in ml of chloroform—were added to a mixture of 3.97 g (50.2 mmol) of pyridine and 5.03 g (50.2 mmol) of butyl vinyl ether in 80 ml of chloroform. After the addition, stirring was continued at room temperature for a further 15 h. 100 ml of water were then added to the mixture, and the organic phase was separated off, dried and concentrated. This gave 10.4 g (78% of theory) of a yellowish oil.

^{1}H-NMR: [$CDCl_3$] 0.96 (t, 3H); 1.43 (m, 2H); 1.75 (m, 2H); 4.04 (t, 2H); 5.97 (d, 1H); 7.91 (d, 1H).

A17.2) Methyl 6-(2-chloro-1,1,2,2-tetrafluoroethyl)-2-oxo-1,2-dihydropyridine-3-carboxylate

0.32 g (13.7 mmol) of sodium were dissolved in 50 ml of methanol, 3.0 g (11.4 mmol) of 1-butoxy-5-chloro-4,4,5,5-tetrafluoropent-1-en-3-one and 1.34 g (11.4 mmol) of methyl malonatemonoamide were added and the mixture was heated under reflux for 6 h. The mixture was concentrated to about ml, 50 ml of 1N hydrochloric acid were then added and the mixture was subsequently extracted repeatedly with ethyl acetate. After drying and concentration, the resulting residue was taken up in diethyl ether and filtered. Concentration of the filtrate gave 1.74 g (52% of theory) of a yellowish powder.

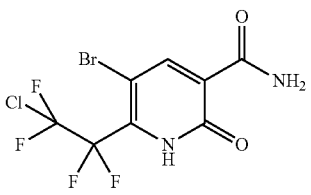
^{1}H-NMR: [DMSO] 3.84 (s, 3H); 7.44 (d, 1H); 8.32 (d, 1H); 12.4 (br, 1H).

A17.3) 6-(2-Chloro-1,1,2,2-tetrafluoroethyl)-N-ethyl-2-oxo-1,2-dihydropyridine-3-carboxamide

At room temperature, 300 mg (1.04 mmol) of methyl 6-(2-chloro-1,1,2,2-tetrafluoroethyl)-2-oxo-1,2-dihydropyridine-3-carboxylate were stirred in 5 ml of aqueous ethylamine solution (70%) for 14 h. The pH was then adjusted to 2 by addition of 1N hydrochloric acid, and the mixture was extracted with dichloromethane. Drying and concentration of the extract gave 310 mg (98% of theory) of the product.

^{1}H-NMR: [$CDCl_3$] 1.27 (t, 3H); 3.50 (m, 2H); 6.88 (d, 1H); 8.68 (d, 1H); 9.32 (br, 1H); 12.6 (br, 1H).

Example A18



5-Bromo-6-(2-chloro-1,1,2,2-tetrafluoroethyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

A18.1) 6-(2-Chloro-1,1,2,2-tetrafluoroethyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

0.53 g (22.8 mmol) of sodium were dissolved in 50 ml of methanol, 5.0 g (19.0 mmol) of 1-butoxy-5-chloro-4,4,5,5-tetrafluoropent-1-en-3-one and 2.0 g (19.0 mmol) of malonamide were then added and the mixture was heated under reflux for 6 h. The mixture was concentrated, and 1N hydrochloric acid was then added. The resulting precipitate was filtered off with suction and dried. This gave 3.8 g (73% of theory) of a brownish powder.

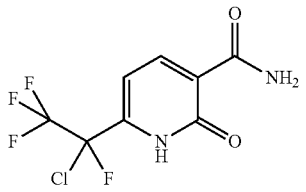
^{1}H-NMR: [DMSO] 7.42 (br, 1H); 8.10 (br, 1H); 8.40 (br, 1H); 8.46 (d, 1H), 13.6 (br, 1H).

A18.2) 5-Bromo-6-(2-chloro-1,1,2,2-tetrafluoroethyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

0.49 g (1.8 mmol) of 6-(2-chloro-1 μl, 2,2-tetrafluoroethyl)-2-oxo-1,2-dihydropyridine-3-carboxamide were dissolved in 5 ml of N,N-dimethylformamide, and 0.48 g (2.7 mmol) of N-bromosuccinimide was added at room temperature. After 2 hours of stirring at room temperature, the reaction mixture was poured into water, resulting in the formation of a precipitate. Filtration with suction, washing with water and drying gave 610 mg (96% of theory) of the product as a yellowish powder.

^{1}H-NMR: [DMSO] 8.25 (br, 1H); 8.35 (br, 1H); 8.61 (s, 1H); 13.7 (br, 1H).

Example A19



6-(1 Chloro-1,2,2,2-tetrafluoroethyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

A19.1) 1-Butoxy-4-chloro-4,5,5,5-tetrafluoropent-1-en-3-one

With stirring and at 0° C., 9.59 g (48.2 mmol) of 2-chlorotetrafluoropropionyl chloride were added dropwise to a mixture of 4.19 g (50.0 mmol) of pyridine and 4.83 g (48.2 mmol) of butyl vinyl ether in 75 ml of dichloromethane. After the addition, stirring was continued at room temperature for another 15 h. The mixture was then washed with 1N hydrochloric acid and 2×100 ml of water, and the organic phase was separated off, dried and concentrated. This gave 6.33 g (50% of theory) of a brown oil.

^{1}H-NMR: [$CDCl_3$] 0.97 (t, 3H); 1.48 (m, 2H); 1.75 (m, 2H); 4.03 (t, 2H); 5.98 (d, 1H); 7.89 (d, 1H).

A19.2) 6-(1-Chloro-1,2,2,2-tetrafluoroethyl)-2-oxo-1,2-dihydropyridine-3-carboxamide

0.33 g (14.4 mmol) of sodium were dissolved in 50 ml of methanol, 3.16 g (12.03 mmol) of 1-butoxy-4-chloro-4,5,5,5-tetrafluoropent-1-en-3-one and 1.27 g (12.03 mmol) of malonamide were added and the mixture was heated under reflux for 7 h. The mixture was concentrated, and 1N hydrochloric acid was then added. The resulting precipitate was filtered off with suction and dried. This gave 380 mg (12% of theory) of a yellowish powder.

^{1}H-NMR: [DMSO] 7.45 (d, 1H); 8.14 (br, 1H); 8.42 (br, 1H); 8.48 (d, 1H); 13.7 (br, 1H).

In an exemplary manner, Table 1 below lists a number of compounds of the general formula (I) which can be obtained in a manner analogous to Examples A1 to A10 above and to the methods mentioned further above.

In the table:

Bu=butyl
Me=methyl
Pr=propyl
i=iso
t=tertiary
Et=ethyl
Ph=phenyl
s=secondary
c=cyclo

This applies correspondingly to composite terms such as

iPr=isopropyl
iBu=isobutyl
sBu=sec-butyl
tBu=tert-butyl
cPr=cyclopropyl
cPentyl=cyclopentyl
cHexyl=cyclohexyl

If an alkyl radical is listed in the tables without further specification, the radical in question is the straight-chain alkyl radical, i.e., for example, Bu=n-Bu=n-butyl.

In the table, the number indices in the formula are not subscript but arranged in the same line height and font size as the symbols for the atoms.

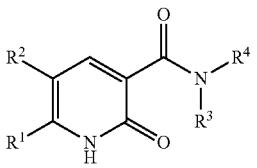
For example, the formula CF3 in the table corresponds to the formula CF_3 according to the customary notation with subscript index, or the formula CH2CH(CH2CH3)2 corresponds to the formula $CH_2CH(CH_2CH)_2$ with subscript indices.

For some compounds (I) in Table 1, physicochemical data (in general ^{1}H-NMR data) are listed in Table 2. Here, the data are assigned to the compounds via the example number according to Table 1.

TABLE 1

Compounds of the formula (I)

(I)

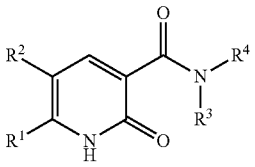


Ex.	R^1	R^2	R^3	R^4
1	CF3	H	H	Me
2	CF3	H	H	Et
3	CF3	H	H	Pr
4	CF3	H	H	iPr
5	CF3	H	H	cPr
6	CF3	H	H	Bu
7	CF3	H	H	cBu
8	CF3	H	H	tBu
9	CF3	H	Me	Me
10	CF3	H	Me	Et
11	CF3	H	Me	Bu
12	CF3	H	Me	Pr
13	CF3	H	Me	iPr
14	CF3	H	Et	Et
15	CF3	H	Et	Pr
16	CF3	H	Et	iPr

TABLE 1-continued

Compounds of the formula (I)

(I)

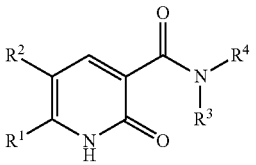


Ex.	R^1	R^2	R^3	R^4
17	CF3	H	Pr	Pr
18	CF3	H	H	cPentyl
19	CF3	H	H	cHexyl
20	CF3	H	H	CH2(CH2)3CH3
21	CF3	H	H	CH2(CH2)4CH3
22	CF3	H	H	CH2—cPr
23	CF3	H	H	CH2—CN
24	CF3	H	H	CH2—C(CH3)3
25	CF3	H	H	CH2CF2CF3
26	CF3	H	H	CH2CF3
27	CF3	H	H	CH2(CF2)2CF3
28	CF3	H	H	CH2CH(CH3)CH2CH3
29	CF3	H	H	CH2C(CH3)2CH2F
30	CF3	H	H	CH2CH(CH3)2
31	CF3	H	H	CH2CH(CH2CH3)2
32	CF3	H	H	CH2CH2CH(CH3)2
33	CF3	H	H	CH2CH2C(CH3)3
34	CF3	H	H	CH2CH═CH2
35	CF3	H	Me	CH2CH═CH2
36	CF3	H	CH2CH═CH2	CH2CH═CH2
37	CF3	H	H	CH2CH═CHCH3
38	CF3	H	H	CH2—C(CH3)═CH2
39	CF3	H	H	CH2—C≡CH
40	CF3	H	Me	CH2—C≡CH
41	CF3	H	H	CH(CH3)CH2CH3
42	CF3	H	H	CH(CH3)cPr
43	CF3	H	H	CH(CH3)(CH2)2CH3
44	CF3	H	H	CH(CH3)(CH2)4CH3
45	CF3	H	H	CH(CH3)(CH2)5CH3
46	CF3	H	H	CH(CH2CH3)(CH2)3CH3
47	CF3	H	H	CH(CH3)CH2CH(CH3)2
48	CF3	H	H	CH(CH3)C(CH3)3
49	CF3	H	H	CH(CH3)CH(CH3)2
50	CF3	H	H	CH(CH3)CH2CH2CH(CH3)2
51	CF3	H	H	CH(CH2CH3)2
52	CF3	H	H	C(CH3)2CH2CH3
53	CF3	H	H	C(CH3)2CH2C(CH3)3
54	CF3	H	H	CH2—CH(OMe)2
55	CF3	H	H	CH2—CH(OEt)2
56	CF3	H	H	CH2CH2—OH
57	CF3	H	H	CH2CH2—OMe
58	CF3	H	Me	CH2CH2—OMe
59	CF3	H	H	CH2CH2—OEt
60	CF3	H	H	CH2CH2—SMe
61	CF3	H	H	CH2CH2—CN
62	CF3	H	H	CH2CH2—NMe2
63	CF3	H	H	CH2CH2-morpholin-4-yl
64	CF3	H	H	CH(CH3)CH2—OMe
65	CF3	H	H	CH(CH3)CH2—NMe2
66	CF3	H	H	CH2CH2CH2—OMe
67	CF3	H	H	CH2CH2CH2—SMe
68	CF3	H	H	CH2CH2CH2—OEt
69	CF3	H	H	CH2CH2CH2—OiPr
70	CF3	H	H	CH2CH2CH2—OBu
71	CF3	H	H	CH2—COOCH3
72	CF3	H	Me	CH2—COOCH3
73	CF3	H	H	CH(CH3)COOMe
74	CF3	H	H	CH(CH3)COOEt
75	CF3	H	H	CH2CH2—COOCH3
76	CF3	H	H	CH(COOCH3)2
77	CF3	H	H	CH(COOEt)CH2—CH(CH3)2
78	CF3	H	H	CH(COOMe)CH(CH3)2
79	CF3	H	H	O—CH2CH3
80	CF3	H	Me	O—CH3
81	CF3	H	H	O—CH2CH═CH2
82	CF3	H	H	O—tBu

TABLE 1-continued

Compounds of the formula (I)

(I)

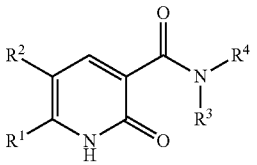


Ex.	R^1	R^2	R^3	R^4
83	CF3	H	H	O—Pr
84	CF3	H	H	O—CH2cPr
85	CF3	H	H	O—CH2CH(CH3)2
86	CF3	H	H	O—CH2CF3
87	CF3	H	H	O—CH(CH3)cPr
88	CF3	H	H	O—CH2CH2Cl
89	CF3	H	H	O—CH2C≡CH
90	CF3	H	H	O—CH2C≡CCH3
91	CF3	H	H	O—CH(CH3)C≡CH
92	CF3	H	H	CH2—Ph
93	CF3	H	Me	CH2—Ph
94	CF3	H	H	CH2-pyridin-3-yl
95	CF3	H	H	CH2-6-Cl-pyridin-3-yl
96	CF3	H	H	CH(CH3)Ph
97	CF3	H	H	CH2CH2—Ph
98	CF3	H	H	CH2-2-CF3—Ph
99	CF3	H	H	CH2CH2CHPh2
100	CF3	H		morpholin-4-yl
101	CF3	H		piperidin-1-yl
102	CF3	H		thiazolidin-3-yl
103	CF3	H		pyrrolidin-1-yl
104	CF3	H		2-methylpyrrolidin-1-yl
105	CF3	H		=CH—N(CH3)2
106	CF3	H		=C(CH3)N(CH3)2
107	CF3	H		=CH—N(C2H5)2
108	CF3	H		=C(CH3)N(C2H5)2
109	CF3	H		=CH-piperidine
110	CF3	H		=CH-morpholine
111	CF3	H		=CH-pyrrolidine
112	CF3	H	H	indan-1-yl
113	CF3	H	H	tetrahydrofuran-2-ylmethyl
114	CF2Cl	H	H	H
115	CF2Cl	H	H	Me
116	CF2Cl	H	H	Et
117	CF2Cl	H	H	Pr
118	CF2Cl	H	H	iPr
119	CF2Cl	H	H	cPr
120	CF2Cl	H	H	Bu
121	CF2Cl	H	H	cBu
122	CF2Cl	H	H	tBu
123	CF2Cl	H	Me	Me
124	CF2Cl	H	Me	Et
125	CF2Cl	H	Me	Bu
126	CF2Cl	H	Me	Pr
127	CF2Cl	H	Me	iPr
128	CF2Cl	H	Et	Et
129	CF2Cl	H	Et	Pr
130	CF2Cl	H	Et	iPr
131	CF2Cl	H	Pr	Pr
132	CF2Cl	H	H	cPentyl
133	CF2Cl	H	H	cHexyl
134	CF2Cl	H	H	CH2(CH2)3CH3
135	CF2Cl	H	H	CH2(CH2)4CH3
136	CF2Cl	H	H	CH2—cPr
137	CF2Cl	H	H	CH2—CN
138	CF2Cl	H	H	CH2—C(CH3)3
139	CF2Cl	H	H	CH2CF2CF3
140	CF2Cl	H	H	CH2CF3
141	CF2Cl	H	H	CH2(CF2)2CF3
142	CF2Cl	H	H	CH2CH(CH3)CH2CH3
143	CF2Cl	H	H	CH2C(CH3)2CH2F
144	CF2Cl	H	H	CH2CH(CH3)2
145	CF2Cl	H	H	CH2CH(CH2CH3)2
146	CF2Cl	H	H	CH2CH2CH(CH3)2
147	CF2Cl	H	H	CH2CH2C(CH3)3
148	CF2Cl	H	H	CH2CH=CH2

TABLE 1-continued

Compounds of the formula (I)

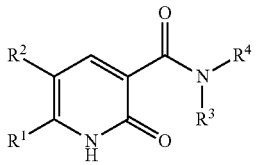
(I)



Ex.	R^1	R^2	R^3	R^4
149	CF2Cl	H	Me	CH2CH=CH2
150	CF2Cl	H	CH2CH=CH2	CH2CH=CH2
151	CF2Cl	H	H	CH2CH=CHCH3
152	CF2Cl	H	H	CH2—C(CH3)=CH2
153	CF2Cl	H	H	CH2—C≡CH
154	CF2Cl	H	Me	CH2—C≡CH
155	CF2Cl	H	H	CH(CH3)CH2CH3
156	CF2Cl	H	H	CH(CH3)cPr
157	CF2Cl	H	H	CH(CH3)(CH2)2CH3
158	CF2Cl	H	H	CH(CH3)(CH2)4CH3
159	CF2Cl	H	H	CH(CH3)(CH3)5CH3
160	CF2Cl	H	H	CH(CH2CH3)(CH2)3CH3
161	CF2Cl	H	H	CH(CH3)CH2CH(CH3)2
162	CF2Cl	H	H	CH(CH3)C(CH3)3
163	CF2Cl	H	H	CH(CH3)CH(CH3)2
164	CF2Cl	H	H	CH(CH3)CH2CH2CH(CH3)2
165	CF2Cl	H	H	CH(CH2CH3)2
166	CF2Cl	H	H	C(CH3)2CH2CH3
167	CF2Cl	H	H	C(CH3)2CH2C(CH3)3
168	CF2Cl	H	H	CH2—CH(OMe)2
169	CF2Cl	H	H	CH2—CH(OEt)2
170	CF2Cl	H	H	CH2CH2—OH
171	CF2Cl	H	H	CH2CH2—OMe
172	CF2Cl	H	Me	CH2CH2—OMe
173	CF2Cl	H	H	CH2CH2—OEt
174	CF2Cl	H	H	CH2CH2—SMe
175	CF2Cl	H	H	CH2CH2—CN
176	CF2Cl	H	H	CH2CH2—NMe2
177	CF2Cl	H	H	CH2CH2-morpholin-4-yl
178	CF2Cl	H	H	CH(CH3)CH2—OMe
179	CF2Cl	H	H	CH(CH3)CH2—NMe2
180	CF2Cl	H	H	CH2CH2CH2—OMe
181	CF2Cl	H	H	CH2CH2CH2—SMe
182	CF2Cl	H	H	CH2CH2CH2—OEt
183	CF2Cl	H	H	CH2CH2CH2—OiPr
184	CF2Cl	H	H	CH2CH2CH2—OBu
185	CF2Cl	H	H	CH2—COOCH3
186	CF2Cl	H	Me	CH2—COOCH3
187	CF2Cl	H	H	CH(CH3)COOMe
188	CF2Cl	H	H	CH(CH3)COOEt
189	CF2Cl	H	H	CH2CH2—COOCH3
190	CF2Cl	H	H	CH(COOCH3)2
191	CF2Cl	H	H	CH(COOEt)CH2—CH(CH3)2
192	CF2Cl	H	H	CH(COOMe)CH(CH3)2
193	CF2Cl	H	H	O—CH2CH3
194	CF2Cl	H	H	O—CH3
195	CF2Cl	H	H	O—CH2CH=CH2
196	CF2Cl	H	H	O—tBu
197	CF2Cl	H	H	O—Pr
198	CF2Cl	H	H	O—CH2cPr
199	CF2Cl	H	H	O—CH2CH(CH3)2
200	CF2Cl	H	H	O—CH2CF3
201	CF2Cl	H	H	O—CH(CH3)cPr
202	CF2Cl	H	H	O—CH2CH2Cl
203	CF2Cl	H	H	O—CH2C≡CH
204	CF2Cl	H	H	O—CH2C≡CCH3
205	CF2Cl	H	H	O—CH(CH3)C≡CH
206	CF2Cl	H	H	CH2—Ph
207	CF2Cl	H	Me	CH2—Ph
208	CF2Cl	H	H	CH2-pyridin-3-yl
209	CF2Cl	H	H	CH2-6-Cl-pyridin-3-yl
210	CF2Cl	H	H	CH(CH3)Ph
211	CF2Cl	H	H	CH2CH2—Ph
212	CF2Cl	H	H	CH2-2-CF3—Ph
213	CF2Cl	H	H	CH2CH2CHPh
214	CF2Cl	H		morpholin-4-yl

TABLE 1-continued

Compounds of the formula (I)

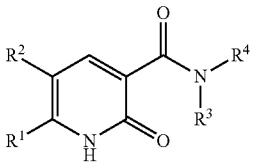


(I)

Ex.	R^1	R^2	R^3	R^4
215	CF2Cl	H		piperidin-1-yl
216	CF2Cl	H		thiazolidin-3-yl
217	CF2Cl	H		pyrrolidin-1-yl
218	CF2Cl	H		2-methylpyrrolidin-1-yl
219	CF2Cl	H		═CH—N(CH3)2
220	CF2Cl	H		═C(CH3)N(CH3)2
221	CF2Cl	H		═CH—N(C2H5)2
222	CF2Cl	H		═C(CH3)N(C2H5)2
223	CF2Cl	H		═CH-piperidine
224	CF2Cl	H		═CH-morpholine
225	CF2Cl	H		═CH-pyrrolidine
226	CF2Cl	H	H	indan-1-yl
227	CF2Cl	H	H	tetrahydrofuran-2-ylmethyl
228	CHF2	H	H	H
229	CHF2	H	H	Me
230	CHF2	H	H	Et
231	CHF2	H	H	Pr
232	CHF2	H	H	iPr
233	CHF2	H	H	cPr
234	CHF2	H	H	Bu
235	CHF2	H	H	cBu
236	CHF2	H	H	tBu
237	CHF2	H	Me	Me
238	CHF2	H	Me	Et
239	CHF2	H	Me	Bu
240	CHF2	H	Me	Pr
241	CHF2	H	Me	iPr
242	CHF2	H	Et	Et
243	CHF2	H	Et	Pr
244	CHF2	H	Et	iPr
245	CHF2	H	Pr	Pr
246	CHF2	H	H	cPentyl
247	CHF2	H	H	cHexyl
248	CHF2	H	H	CH2(CH2)3CH3
249	CHF2	H	H	CH2(CH2)4CH3
250	CHF2	H	H	CH2—cPr
251	CHF2	H	H	CH2—CN
252	CHF2	H	H	CH2—C(CH3)3
253	CHF2	H	H	CH2CF2CF3
254	CHF2	H	H	CH2CF3
255	CHF2	H	H	CH2(CF2)2CF3
256	CHF2	H	H	CH2CH(CH3)CH2CH3
257	CHF2	H	H	CH2C(CH3)2CH2F
258	CHF2	H	H	CH2CH(CH3)2
259	CHF2	H	H	CH2CH(CH2CH3)2
260	CHF2	H	H	CH2CH2CH(CH3)2
261	CHF2	H	H	CH2CH2C(CH3)3
262	CHF2	H	H	CH2CH═CH2
263	CHF2	H	Me	CH2CH═CH2
264	CHF2	H	CH2CH═CH2	CH2CH═CH2
265	CHF2	H	H	CH2CH═CHCH3
266	CHF2	H	H	CH2—C(CH3)═CH2
267	CHF2	H	H	CH2—C≡CH
268	CHF2	H	Me	CH2—C≡CH
269	CHF2	H	H	CH(CH3)CH2CH3
270	CHF2	H	H	CH(CH3)cPr
271	CHF2	H	H	CH(CH3)(CH2)2CH3
272	CHF2	H	H	CH(CH3)(CH2)4CH3
273	CHF2	H	H	CH(CH3)(CH2)5CH3
274	CHF2	H	H	CH(CH2CH3)(CH2)3CH3
275	CHF2	H	H	CH(CH3)CH2CH(CH3)2
276	CHF2	H	H	CH(CH3)C(CH3)3
277	CHF2	H	H	CH(CH3)CH(CH3)2
278	CHF2	H	H	CH(CH3)CH2CH2CH(CH3)2
279	CHF2	H	H	CH(CH2CH3)2
280	CHF2	H	H	C(CH3)2CH2CH3

TABLE 1-continued

Compounds of the formula (I)

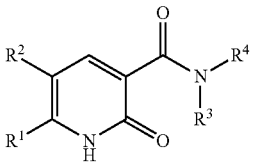


(I)

Ex.	R^1	R^2	R^3	R^4
281	CHF2	H	H	C(CH3)2CH2C(CH3)3
282	CHF2	H	H	CH2—CH(OMe)2
283	CHF2	H	H	CH2—CH(OEt)2
284	CHF2	H	H	CH2CH2—OH
285	CHF2	H	H	CH2CH2—OMe
286	CHF2	H	H	CH2CH2—OEt
287	CHF2	H	H	CH2CH2—SMe
288	CHF2	H	H	CH2CH2—CN
289	CHF2	H	H	CH2CH2—NMe2
290	CHF2	H	H	CH2CH2-morpholin-4-yl
291	CHF2	H	H	CH(CH3)CH2—OMe
292	CHF2	H	H	CH(CH3)CH2—NMe2
293	CHF2	H	H	CH2CH2CH2—OMe
294	CHF2	H	H	CH2CH2CH2—SMe
295	CHF2	H	H	CH2CH2CH2—OEt
296	CHF2	H	H	CH2CH2CH2—OiPr
297	CHF2	H	H	CH2CH2CH2—OBu
298	CHF2	H	H	CH2—COOCH3
299	CHF2	H	Me	CH2—COOCH3
300	CHF2	H	H	CH(CH3)COOMe
301	CHF2	H	H	CH(CH3)COOEt
302	CHF2	H	H	CH2CH2—COOCH3
303	CHF2	H	H	CH(COOCH3)2
304	CHF2	H	H	CH(COOEt)CH2—CH(CH3)2
305	CHF2	H	H	CH(COOMe)CH(CH3)2
306	CHF2	H	H	O—CH2CH3
307	CHF2	H	H	O—CH3
308	CHF2	H	H	O—CH2CH═CH2
309	CHF2	H	H	O—tBu
310	CHF2	H	H	O—Pr
311	CHF2	H	H	O—CH2cPr
312	CHF2	H	H	O—CH2CH(CH3)2
313	CHF2	H	H	O—CH2CF3
314	CHF2	H	H	O—CH(CH3)cPr
315	CHF2	H	H	O—CH2CH2Cl
316	CHF2	H	H	O—CH2C≡CH
317	CHF2	H	H	O—CH2C≡CCH3
318	CHF2	H	H	O—CH(CH3)C≡CH
319	CHF2	H	H	CH2—Ph
320	CHF2	H	Me	CH2—Ph
321	CHF2	H	H	CH2-pyridin-3-yl
322	CHF2	H	H	CH2-6-Cl-pyridin-3-yl
323	CHF2	H	H	CH(CH3)Ph
324	CHF2	H	H	CH2CH2—Ph
325	CHF2	H	H	CH2-2-CF3—Ph
326	CHF2	H	H	CH2CH2CHPh
327	CHF2	H		morpholin-4-yl
328	CHF2	H		piperidin-1-yl
329	CHF2	H		thiazolidin-3-yl
330	CHF2	H		pyrrolidin-1-yl
331	CHF2	H		2-methylpyrrolidin-1-yl
332	CHF2	H		═CH—N(CH3)2
333	CHF2	H		═C(CH3)N(CH3)2
334	CHF2	H		═CH—N(C2H5)2
335	CHF2	H		═C(CH3)N(C2H5)2
336	CHF2	H		═CH-piperidine
337	CHF2	H		═CH-morpholine
338	CHF2	H		═CH-pyrrolidine
339	CHF2	H	H	indan-1-yl
340	CHF2	H	H	tetrahydrofuran-2-ylmethyl
341	CF2CF3	H	H	H
342	CF2CF3	H	H	Me
343	CF2CF3	H	H	Et
344	CF2CF3	H	H	Pr
345	CF2CF3	H	H	iPr
346	CF2CF3	H	H	cPr

TABLE 1-continued

Compounds of the formula (I)

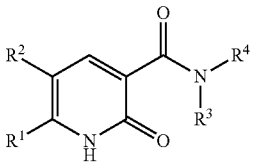


(I)

Ex.	R^1	R^2	R^3	R^4
347	CF2CF3	H	H	Bu
348	CF2CF3	H	H	cBu
349	CF2CF3	H	H	tBu
350	CF2CF3	H	Me	Me
351	CF2CF3	H	Me	Et
352	CF2CF3	H	Me	Bu
353	CF2CF3	H	Me	Pr
354	CF2CF3	H	Me	iPr
355	CF2CF3	H	Et	Et
356	CF2CF3	H	Et	Pr
357	CF2CF3	H	Et	iPr
358	CF2CF3	H	Pr	Pr
359	CF2CF3	H	H	cPentyl
360	CF2CF3	H	H	cHexyl
361	CF2CF3	H	H	CH2(CH2)3CH3
362	CF2CF3	H	H	CH2(CH2)4CH3
363	CF2CF3	H	H	CH2—cPr
364	CF2CF3	H	H	CH2—CN
365	CF2CF3	H	H	CH2—C(CH3)3
366	CF2CF3	H	H	CH2CF2CF3
367	CF2CF3	H	H	CH2CF3
368	CF2CF3	H	H	CH2(CF2)2CF3
369	CF2CF3	H	H	CH2CH(CH3)CH2CH3
370	CF2CF3	H	H	CH2C(CH3)2CH2F
371	CF2CF3	H	H	CH2CH(CH3)2
372	CF2CF3	H	H	CH2CH(CH2CH3)2
373	CF2CF3	H	H	CH2CH2CH(CH3)2
374	CF2CF3	H	H	CH2CH2C(CH3)3
375	CF2CF3	H	H	CH2CH═CH2
376	CF2CF3	H	Me	CH2CH═CH2
377	CF2CF3	H	CH2CH═CH2	CH2CH═CH2
378	CF2CF3	H	H	CH2CH═CHCH3
379	CF2CF3	H	H	CH2—C(CH3)═CH2
380	CF2CF3	H	H	CH2—C≡CH
381	CF2CF3	H	Me	CH2—C≡CH
382	CF2CF3	H	H	CH(CH3)CH2CH3
383	CF2CF3	H	H	CH(CH3)cPr
384	CF2CF3	H	H	CH(CH3)(CH2)2CH3
385	CF2CF3	H	H	CH(CH3)(CH2)4CH3
386	CF2CF3	H	H	CH(CH3)(CH2)5CH3
387	CF2CF3	H	H	CH(CH2CH3)(CH2)3CH3
388	CF2CF3	H	H	CH(CH3)CH2CH(CH3)2
389	CF2CF3	H	H	CH(CH3)C(CH3)3
390	CF2CF3	H	H	CH(CH3)CH(CH3)2
391	CF2CF3	H	H	CH(CH3)CH2CH2CH(CH3)2
392	CF2CF3	H	H	CH(CH2CH3)2
393	CF2CF3	H	H	C(CH3)2CH2CH3
394	CF2CF3	H	H	C(CH3)2CH2C(CH3)3
395	CF2CF3	H	H	CH2—CH(OMe)2
396	CF2CF3	H	H	CH2—CH(OEt)2
397	CF2CF3	H	H	CH2CH2—OH
398	CF2CF3	H	H	CH2CH2—OMe
399	CF2CF3	H	Me	CH2CH2—OMe
400	CF2CF3	H	H	CH2CH2—OEt
401	CF2CF3	H	H	CH2CH2—SMe
402	CF2CF3	H	H	CH2CH2—CN
403	CF2CF3	H	H	CH2CH2—NMe2
404	CF2CF3	H	H	CH2CH2-morpholin-4-yl
405	CF2CF3	H	H	CH(CH3)CH2—OMe
406	CF2CF3	H	H	CH(CH3)CH2—NMe2
407	CF2CF3	H	H	CH2CH2CH2—OMe
408	CF2CF3	H	H	CH2CH2CH2—SMe
409	CF2CF3	H	H	CH2CH2CH2—OEt
410	CF2CF3	H	H	CH2CH2CH2—OiPr
411	CF2CF3	H	H	CH2CH2CH2—OBu
412	CF2CF3	H	H	CH2—COOCH3

TABLE 1-continued

Compounds of the formula (I)

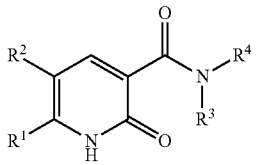


(I)

Ex.	R^1	R^2	R^3	R^4
413	CF2CF3	H	Me	CH2—COOCH3
414	CF2CF3	H	H	CH(CH3)COOMe
415	CF2CF3	H	H	CH(CH3)COOEt
416	CF2CF3	H	H	CH2CH2—COOCH3
417	CF2CF3	H	H	CH(COOCH3)2
418	CF2CF3	H	H	CH(COOEt)CH2—CH(CH3)2
419	CF2CF3	H	H	CH(COOMe)CH(CH3)2
420	CF2CF3	H	H	O—CH2CH3
421	CF2CF3	H	H	O—CH3
422	CF2CF3	H	H	O—CH2CH═CH2
423	CF2CF3	H	H	O—tBu
424	CF2CF3	H	H	O—Pr
425	CF2CF3	H	H	O—CH2cPr
426	CF2CF3	H	H	O—CH2CH(CH3)2
427	CF2CF3	H	H	O—CH2CF3
428	CF2CF3	H	H	O—CH(CH3)cPr
429	CF2CF3	H	H	O—CH2CH2Cl
430	CF2CF3	H	H	O—CH2C≡CH
431	CF2CF3	H	H	O—CH2C≡CCH3
432	CF2CF3	H	H	O—CH(CH3)C≡CH
433	CF2CF3	H	H	CH2—Ph
434	CF2CF3	H	Me	CH2—Ph
435	CF2CF3	H	H	CH2-pyridin-3-yl
436	CF2CF3	H	H	CH2-6-Cl-pyridin-3-yl
437	CF2CF3	H	H	CH(CH3)Ph
438	CF2CF3	H	H	CH2CH2—Ph
439	CF2CF3	H	H	CH2-2-CF3—Ph
440	CF2CF3	H	H	CH2CH2CHPh
441	CF2CF3	H		morpholin-4-yl
442	CF2CF3	H		piperidin-1-yl
443	CF2CF3	H		thiazolidin-3-yl
444	CF2CF3	H		pyrrolidin-1-yl
445	CF2CF3	H		2-methylpyrrolidin-1-yl
446	CF2CF3	H		═CH—N(CH3)2
447	CF2CF3	H		═C(CH3)N(CH3)2
448	CF2CF3	H		═CH—N(C2H5)2
449	CF2CF3	H		═C(CH3)N(C2H5)2
450	CF2CF3	H		═CH-piperidine
451	CF2CF3	H		═CH-morpholine
452	CF2CF3	H		═CH-pyrrolidine
453	CF2CF3	H	H	indan-1-yl
454	CF2CF3	H	H	tetrahydrofuran-2-ylmethyl
455	CF3	Cl	H	H
456	CF3	Cl	H	Me
457	CF3	Cl	H	Et
458	CF3	Cl	H	Pr
459	CF3	Cl	H	iPr
460	CF3	Cl	H	cPr
461	CF3	Cl	H	Bu
462	CF3	Cl	H	cBu
463	CF3	Cl	H	tBu
464	CF3	Cl	Me	Me
465	CF3	Cl	Me	Et
466	CF3	Cl	Me	Bu
467	CF3	Cl	Me	Pr
468	CF3	Cl	Me	iPr
469	CF3	Cl	Et	Et
470	CF3	Cl	Et	Pr
471	CF3	Cl	Et	iPr
472	CF3	Cl	Pr	Pr
473	CF3	Cl	H	cPentyl
474	CF3	Cl	H	cHexyl
475	CF3	Cl	H	CH2(CH2)3CH3
476	CF3	Cl	H	CH2(CH2)4CH3
477	CF3	Cl	H	CH2—cPr
478	CF3	Cl	H	CH2—CN

TABLE 1-continued

Compounds of the formula (I)

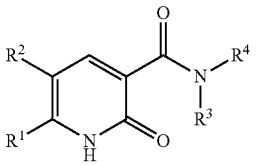


(I)

Ex.	R^1	R^2	R^3	R^4
479	CF3	Cl	H	CH2—C(CH3)3
480	CF3	Cl	H	CH2CF2CF3
481	CF3	Cl	H	CH2CF3
482	CF3	Cl	H	CH2(CF2)2CF3
483	CF3	Cl	H	CH2CH(CH3)CH2CH3
484	CF3	Cl	H	CH2C(CH3)2CH2F
485	CF3	Cl	H	CH2CH(CH3)2
486	CF3	Cl	H	CH2CH(CH2CH3)2
487	CF3	Cl	H	CH2CH2CH(CH3)2
488	CF3	Cl	H	CH2CH2C(CH3)3
489	CF3	Cl	H	CH2CH═CH2
490	CF3	Cl	Me	CH2CH═CH2
491	CF3	Cl	CH2CH═CH2	CH2CH═CH2
492	CF3	Cl	H	CH2CH═CHCH3
493	CF3	Cl	H	CH2—C(CH3)═CH2
494	CF3	Cl	H	CH2—C≡CH
495	CF3	Cl	Me	CH2—C≡CH
496	CF3	Cl	H	CH(CH3)CH2CH3
497	CF3	Cl	H	CH(CH3)cPr
498	CF3	Cl	H	CH(CH3)(CH2)2CH3
499	CF3	Cl	H	CH(CH3)(CH2)4CH3
500	CF3	Cl	H	CH(CH3)(CH2)5CH3
501	CF3	Cl	H	CH(CH2CH3)(CH2)3CH3
502	CF3	Cl	H	CH(CH3)CH2CH(CH3)2
503	CF3	Cl	H	CH(CH3)C(CH3)3
504	CF3	Cl	H	CH(CH3)CH(CH3)2
505	CF3	Cl	H	CH(CH3)CH2CH2CH(CH3)2
506	CF3	Cl	H	CH(CH2CH3)2
507	CF3	Cl	H	C(CH3)2CH2CH3
508	CF3	Cl	H	C(CH3)2CH2C(CH3)3
509	CF3	Cl	H	CH2—CH(OMe)2
510	CF3	Cl	H	CH2—CH(OEt)2
511	CF3	Cl	H	CH2CH2—OH
512	CF3	Cl	H	CH2CH2—OMe
513	CF3	Cl	Me	CH2CH2—OMe
514	CF3	Cl	H	CH2CH2—OEt
515	CF3	Cl	H	CH2CH2—SMe
516	CF3	Cl	H	CH2CH2—CN
517	CF3	Cl	H	CH2CH2—NMe2
518	CF3	Cl	H	CH2CH2-morpholin-4-yl
519	CF3	Cl	H	CH(CH3)CH2—OMe
520	CF3	Cl	H	CH(CH3)CH2—NMe2
521	CF3	Cl	H	CH2CH2CH2—OMe
522	CF3	Cl	H	CH2CH2CH2—SMe
523	CF3	Cl	H	CH2CH2CH2—OEt
524	CF3	Cl	H	CH2CH2CH2—OiPr
525	CF3	Cl	H	CH2CH2CH2—OBu
526	CF3	Cl	H	CH2—COOCH3
527	CF3	Cl	Me	CH2—COOCH3
528	CF3	Cl	H	CH(CH3)COOMe
529	CF3	Cl	H	CH(CH3)COOEt
530	CF3	Cl	H	CH2CH2—COOCH3
531	CF3	Cl	H	CH(COOCH3)2
532	CF3	Cl	H	CH(COOEt)CH2—CH(CH3)2
533	CF3	Cl	H	CH(COOMe)CH(CH3)2
534	CF3	Cl	H	O—CH2CH3
535	CF3	Cl	Me	O—CH3
536	CF3	Cl	H	O—CH2CH═CH2
537	CF3	Cl	H	O—tBu
538	CF3	Cl	H	O—Pr
539	CF3	Cl	H	O—CH2cPr
540	CF3	Cl	H	O—CH2CH(CH3)2
541	CF3	Cl	H	O—CH2CF3
542	CF3	Cl	H	O—CH(CH3)cPr
543	CF3	Cl	H	O—CH2CH2Cl
544	CF3	Cl	H	O—CH2C≡CH

TABLE 1-continued

Compounds of the formula (I)

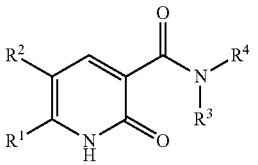


(I)

Ex.	R^1	R^2	R^3	R^4
545	CF3	Cl	H	O—CH2C≡CCH3
546	CF3	Cl	H	O—CH(CH3)C≡CH
547	CF3	Cl	H	CH2—Ph
548	CF3	Cl	Me	CH2—Ph
549	CF3	Cl	H	CH2-pyridin-3-yl
550	CF3	Cl	H	CH2-6-Cl-pyridin-3-yl
551	CF3	Cl	H	CH(CH3)Ph
552	CF3	Cl	H	CH2CH2—Ph
553	CF3	Cl	H	CH2-2-CF3—Ph
554	CF3	Cl	H	CH2CH2CHPh
555	CF3	Cl		morpholin-4-yl
556	CF3	Cl		piperidin-1-yl
557	CF3	Cl		thiazolidin-3-yl
558	CF3	Cl		pyrrolidin-1-yl
559	CF3	Cl		2-methylpyrrolidin-1-yl
560	CF3	Cl		═CH—N(CH3)2
561	CF3	Cl		═C(CH3)N(CH3)2
562	CF3	Cl		═CH—N(C2H5)2
563	CF3	Cl		═C(CH3)N(C2H5)2
564	CF3	Cl		═CH-piperidine
565	CF3	Cl		═CH-morpholine
566	CF3	Cl		═CH-pyrrolidine
567	CF3	Cl	H	indan-1-yl
568	CF3	Cl	H	tetrahydrofuran-2-ylmethyl
569	CF2Cl	Cl	H	H
570	CF2Cl	Cl	H	Me
571	CF2Cl	Cl	H	Et
572	CF2Cl	Cl	H	Pr
573	CF2Cl	Cl	H	iPr
574	CF2Cl	Cl	H	cPr
575	CF2Cl	Cl	H	Bu
576	CF2Cl	Cl	H	cBu
577	CF2Cl	Cl	H	tBu
578	CF2Cl	Cl	Me	Me
579	CF2Cl	Cl	Me	Et
580	CF2Cl	Cl	Me	Bu
581	CF2Cl	Cl	Me	Pr
582	CF2Cl	Cl	Me	iPr
583	CF2Cl	Cl	Et	Et
584	CF2Cl	Cl	Et	Pr
585	CF2Cl	Cl	Et	iPr
586	CF2Cl	Cl	Pr	Pr
587	CF2Cl	Cl	H	cPentyl
588	CF2Cl	Cl	H	cHexyl
589	CF2Cl	Cl	H	CH2(CH2)3CH3
590	CF2Cl	Cl	H	CH2(CH2)4CH3
591	CF2Cl	Cl	H	CH2—cPr
592	CF2Cl	Cl	H	CH2—CN
593	CF2Cl	Cl	H	CH2—C(CH3)3
594	CF2Cl	Cl	H	CH2CF2CF3
595	CF2Cl	Cl	H	CH2CF3
596	CF2Cl	Cl	H	CH2(CF2)2CF3
597	CF2Cl	Cl	H	CH2CH(CH3)CH2CH3
598	CF2Cl	Cl	H	CH2C(CH3)2CH2F
599	CF2Cl	Cl	H	CH2CH(CH3)2
600	CF2Cl	Cl	H	CH2CH(CH2CH3)2
601	CF2Cl	Cl	H	CH2CH2CH(CH3)2
602	CF2Cl	Cl	H	CH2CH2C(CH3)3
603	CF2Cl	Cl	H	CH2CH═CH2
604	CF2Cl	Cl	Me	CH2CH═CH2
605	CF2Cl	Cl	CH2CH═CH2	CH2CH═CH2
606	CF2Cl	Cl	H	CH2CH═CHCH3
607	CF2Cl	Cl	H	CH2—C(CH3)═CH2
608	CF2Cl	Cl	H	CH2—C≡CH
609	CF2Cl	Cl	Me	CH2—C≡CH
610	CF2Cl	Cl	H	CH(CH3)CH2CH3

TABLE 1-continued

Compounds of the formula (I)

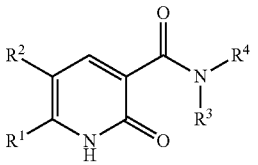


(I)

Ex.	R^1	R^2	R^3	R^4
611	CF2Cl	Cl	H	CH(CH3)cPr
612	CF2Cl	Cl	H	CH(CH3)(CH2)2CH3
613	CF2Cl	Cl	H	CH(CH3)(CH2)4CH3
614	CF2Cl	Cl	H	CH(CH3)(CH2)5CH3
615	CF2Cl	Cl	H	CH(CH2CH3)(CH2)3CH3
616	CF2Cl	Cl	H	CH(CH3)CH2CH(CH3)2
617	CF2Cl	Cl	H	CH(CH3)C(CH3)3
618	CF2Cl	Cl	H	CH(CH3)CH(CH3)2
619	CF2Cl	Cl	H	CH(CH3)CH2CH2CH(CH3)2
620	CF2Cl	Cl	H	CH(CH2CH3)2
621	CF2Cl	Cl	H	C(CH3)2CH2CH3
622	CF2Cl	Cl	H	C(CH3)2CH2C(CH3)3
623	CF2Cl	Cl	H	CH2—CH(OMe)2
624	CF2Cl	Cl	H	CH2—CH(OEt)2
625	CF2Cl	Cl	H	CH2CH2—OH
626	CF2Cl	Cl	H	CH2CH2—OMe
627	CF2Cl	Cl	Me	CH2CH2—OMe
628	CF2Cl	Cl	H	CH2CH2—OEt
629	CF2Cl	Cl	H	CH2CH2—SMe
630	CF2Cl	Cl	H	CH2CH2—CN
631	CF2Cl	Cl	H	CH2CH2—NMe2
632	CF2Cl	Cl	H	CH2CH2-morpholin-4-yl
633	CF2Cl	Cl	H	CH(CH3)CH2—OMe
634	CF2Cl	Cl	H	CH(CH3)CH2—NMe2
635	CF2Cl	Cl	H	CH2CH2CH2—OMe
636	CF2Cl	Cl	H	CH2CH2CH2—SMe
637	CF2Cl	Cl	H	CH2CH2CH2—OEt
638	CF2Cl	Cl	H	CH2CH2CH2—OiPr
639	CF2Cl	Cl	H	CH2CH2CH2—OBu
640	CF2Cl	Cl	H	CH2—COOCH3
641	CF2Cl	Cl	Me	CH2—COOCH3
642	CF2Cl	Cl	H	CH(CH3)COOMe
643	CF2Cl	Cl	H	CH(CH3)COOEt
644	CF2Cl	Cl	H	CH2CH2—COOCH3
645	CF2Cl	Cl	H	CH(COOCH3)2
646	CF2Cl	Cl	H	CH(COOEt)CH2—CH(CH3)2
647	CF2Cl	Cl	H	CH(COOMe)CH(CH3)2
648	CF2Cl	Cl	H	O—CH2CH3
649	CF2Cl	Cl	H	O—CH3
650	CF2Cl	Cl	H	O—CH2CH═CH2
651	CF2Cl	Cl	H	O—tBu
652	CF2Cl	Cl	H	O—Pr
653	CF2Cl	Cl	H	O—CH2cPr
654	CF2Cl	Cl	H	O—CH2CH(CH3)2
655	CF2Cl	Cl	H	O—CH2CF3
656	CF2Cl	Cl	H	O—CH(CH3)cPr
657	CF2Cl	Cl	H	O—CH2CH2Cl
658	CF2Cl	Cl	H	O—CH2C≡CH
659	CF2Cl	Cl	H	O—CH2C≡CCH3
660	CF2Cl	Cl	H	O—CH(CH3)C≡CH
661	CF2Cl	Cl	H	CH2—Ph
662	CF2Cl	Cl	Me	CH2—Ph
663	CF2Cl	Cl	H	CH2-pyridin-3-yl
664	CF2Cl	Cl	H	CH2-6-Cl-pyridin-3-yl
665	CF2Cl	Cl	H	CH(CH3)Ph
666	CF2Cl	Cl	H	CH2CH2—Ph
667	CF2Cl	Cl	H	CH2-2-CF3—Ph
668	CF2Cl	Cl	H	CH2CH2CHPh
669	CF2Cl	Cl		morpholin-4-yl
670	CF2Cl	Cl		piperidin-1-yl
671	CF2Cl	Cl		thiazolidin-3-yl
672	CF2Cl	Cl		pyrrolidin-1-yl
673	CF2Cl	Cl		2-methylpyrrolidin-1-yl
674	CF2Cl	Cl		═CH—N(CH3)2
675	CF2Cl	Cl		═C(CH3)N(CH3)2
676	CF2Cl	Cl		═CH—N(C2H5)2

TABLE 1-continued

Compounds of the formula (I)

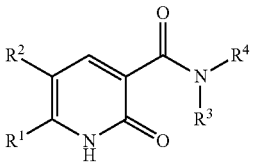


(I)

Ex.	R^1	R^2	R^3	R^4
677	CF2Cl	Cl		═C(CH3)N(C2H5)2
678	CF2Cl	Cl		═CH-piperidine
679	CF2Cl	Cl		═CH-morpholine
680	CF2Cl	Cl		═CH-pyrrolidine
681	CF2Cl	Cl	H	indan-1-yl
682	CF2Cl	Cl	H	tetrahydrofuran-2-ylmethyl
683	CHF2	Cl	H	H
684	CHF2	Cl	H	Me
685	CHF2	Cl	H	Et
686	CHF2	Cl	H	Pr
687	CHF2	Cl	H	iPr
688	CHF2	Cl	H	cPr
689	CHF2	Cl	H	Bu
690	CHF2	Cl	H	cBu
691	CHF2	Cl	H	tBu
692	CHF2	Cl	Me	Me
693	CHF2	Cl	Me	Et
694	CHF2	Cl	Me	Bu
695	CHF2	Cl	Me	Pr
696	CHF2	Cl	Me	iPr
697	CHF2	Cl	Et	Et
698	CHF2	Cl	Et	Pr
699	CHF2	Cl	Et	iPr
700	CHF2	Cl	Pr	Pr
701	CHF2	Cl	H	cPentyl
702	CHF2	Cl	H	cHexyl
703	CHF2	Cl	H	CH2(CH2)3CH3
704	CHF2	Cl	H	CH2(CH2)4CH3
705	CHF2	Cl	H	CH2—cPr
706	CHF2	Cl	H	CH2—CN
707	CHF2	Cl	H	CH2—C(CH3)3
708	CHF2	Cl	H	CH2CF2CF3
709	CHF2	Cl	H	CH2CF3
710	CHF2	Cl	H	CH2(CF2)2CF3
711	CHF2	Cl	H	CH2CH(CH3)CH2CH3
712	CHF2	Cl	H	CH2C(CH3)2CH2F
713	CHF2	Cl	H	CH2CH(CH3)2
714	CHF2	Cl	H	CH2CH(CH2CH3)2
715	CHF2	Cl	H	CH2CH2CH(CH3)2
716	CHF2	Cl	H	CH2CH2C(CH3)3
717	CHF2	Cl	H	CH2CH═CH2
718	CHF2	Cl	Me	CH2CH═CH2
719	CHF2	Cl	CH2CH═CH2	CH2CH═CH2
720	CHF2	Cl	H	CH2CH═CHCH3
721	CHF2	Cl	H	CH2—C(CH3)═CH2
722	CHF2	Cl	H	CH2—C≡CH
723	CHF2	Cl	Me	CH2—C≡CH
724	CHF2	Cl	H	CH(CH3)CH2CH3
725	CHF2	Cl	H	CH(CH3)cPr
726	CHF2	Cl	H	CH(CH3)(CH2)2CH3
727	CHF2	Cl	H	CH(CH3)(CH2)4CH3
728	CHF2	Cl	H	CH(CH3)(CH2)5CH3
729	CHF2	Cl	H	CH(CH2CH3)(CH2)3CH3
730	CHF2	Cl	H	CH(CH3)CH2CH(CH3)2
731	CHF2	Cl	H	CH(CH3)C(CH3)3
732	CHF2	Cl	H	CH(CH3)CH(CH3)2
733	CHF2	Cl	H	CH(CH3)CH2CH2CH(CH3)2
734	CHF2	Cl	H	CH(CH2CH3)2
735	CHF2	Cl	H	C(CH3)2CH2CH3
736	CHF2	Cl	H	C(CH3)2CH2C(CH3)3
737	CHF2	Cl	H	CH2—CH(OMe)2
738	CHF2	Cl	H	CH2—CH(OEt)2
739	CHF2	Cl	H	CH2CH2—OH
740	CHF2	Cl	H	CH2CH2—OMe
741	CHF2	Cl	Me	CH2CH2—OMe
742	CHF2	Cl	H	CH2CH2—OEt

TABLE 1-continued

Compounds of the formula (I)

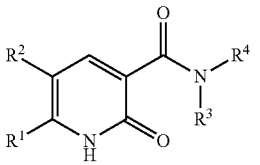


(I)

Ex.	R^1	R^2	R^3	R^4
743	CHF2	Cl	H	CH2CH2—SMe
744	CHF2	Cl	H	CH2CH2—CN
745	CHF2	Cl	H	CH2CH2—NMe2
746	CHF2	Cl	H	CH2CH2-morpholin-4-yl
747	CHF2	Cl	H	CH(CH3)CH2—OMe
748	CHF2	Cl	H	CH(CH3)CH2—NMe2
749	CHF2	Cl	H	CH2CH2CH2—OMe
750	CHF2	Cl	H	CH2CH2CH2—SMe
751	CHF2	Cl	H	CH2CH2CH2—OEt
752	CHF2	Cl	H	CH2CH2CH2—OiPr
753	CHF2	Cl	H	CH2CH2CH2—OBu
754	CHF2	Cl	H	CH2—COOCH3
755	CHF2	Cl	Me	CH2—COOCH3
756	CHF2	Cl	H	CH(CH3)COOMe
757	CHF2	Cl	H	CH(CH3)COOEt
758	CHF2	Cl	H	CH2CH2—COOCH3
759	CHF2	Cl	H	CH(COOCH3)2
760	CHF2	Cl	H	CH(COOEt)CH2—CH(CH3)2
761	CHF2	Cl	H	CH(COOMe)CH(CH3)2
762	CHF2	Cl	H	O—CH2CH3
763	CHF2	Cl	H	O—CH3
764	CHF2	Cl	H	O—CH2CH═CH2
765	CHF2	Cl	H	O—tBu
766	CHF2	Cl	H	O—Pr
767	CHF2	Cl	H	O—CH2cPr
768	CHF2	Cl	H	O—CH2CH(CH3)2
769	CHF2	Cl	H	O—CH2CF3
770	CHF2	Cl	H	O—CH(CH3)cPr
771	CHF2	Cl	H	O—CH2CH2Cl
772	CHF2	Cl	H	O—CH2C≡CH
773	CHF2	Cl	H	O—CH2C≡CCH3
774	CHF2	Cl	H	O—CH(CH3)C≡CH
775	CHF2	Cl	H	CH2—Ph
776	CHF2	Cl	Me	CH2—Ph
777	CHF2	Cl	H	CH2-pyridin-3-yl
778	CHF2	Cl	H	CH2-6-Cl-pyridin-3-yl
779	CHF2	Cl	H	CH(CH3)Ph
780	CHF2	Cl	H	CH2CH2—Ph
781	CHF2	Cl	H	CH2-2-CF3—Ph
782	CHF2	Cl	H	CH2CH2CHPh
783	CHF2	Cl		morpholin-4-yl
784	CHF2	Cl		piperidin-1-yl
785	CHF2	Cl		thiazolidin-3-yl
786	CHF2	Cl		pyrrolidin-1-yl
787	CHF2	Cl		2-methylpyrrolidin-1-yl
788	CHF2	Cl		═CH—N(CH3)2
789	CHF2	Cl		═C(CH3)N(CH3)2
790	CHF2	Cl		═CH—N(C2H5)2
791	CHF2	Cl		═C(CH3)N(C2H5)2
792	CHF2	Cl		═CH-piperidine
793	CHF2	Cl		═CH-morpholine
794	CHF2	Cl		═CH-pyrrolidine
795	CHF2	Cl	H	indan-1-yl
796	CHF2	Cl	H	tetrahydrofuran-2-ylmethyl
797	CF2CF3	Cl	H	H
798	CF2CF3	Cl	H	Me
799	CF2CF3	Cl	H	Et
800	CF2CF3	Cl	H	Pr
801	CF2CF3	Cl	H	iPr
802	CF2CF3	Cl	H	cPr
803	CF2CF3	Cl	H	Bu
804	CF2CF3	Cl	H	cBu
805	CF2CF3	Cl	H	tBu
806	CF2CF3	Cl	Me	Me
807	CF2CF3	Cl	Me	Et
808	CF2CF3	Cl	Me	Bu

TABLE 1-continued

Compounds of the formula (I)

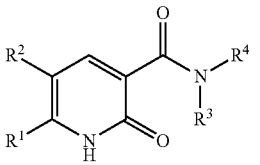


(I)

Ex.	R^1	R^2	R^3	R^4
809	CF2CF3	Cl	Me	Pr
810	CF2CF3	Cl	Me	iPr
811	CF2CF3	Cl	Et	Et
812	CF2CF3	Cl	Et	Pr
813	CF2CF3	Cl	Et	iPr
814	CF2CF3	Cl	Pr	Pr
815	CF2CF3	Cl	H	cPentyl
816	CF2CF3	Cl	H	cHexyl
817	CF2CF3	Cl	H	CH2(CH2)3CH3
818	CF2CF3	Cl	H	CH2(CH2)4CH3
819	CF2CF3	Cl	H	CH2—cPr
820	CF2CF3	Cl	H	CH2—CN
821	CF2CF3	Cl	H	CH2—C(CH3)3
822	CF2CF3	Cl	H	CH2CF2CF3
823	CF2CF3	Cl	H	CH2CF3
824	CF2CF3	Cl	H	CH2(CF2)2CF3
825	CF2CF3	Cl	H	CH2CH(CH3)CH2CH3
826	CF2CF3	Cl	H	CH2C(CH3)2CH2F
827	CF2CF3	Cl	H	CH2CH(CH3)2
828	CF2CF3	Cl	H	CH2CH(CH2CH3)2
829	CF2CF3	Cl	H	CH2CH2CH(CH3)2
830	CF2CF3	Cl	H	CH2CH2C(CH3)3
831	CF2CF3	Cl	H	CH2CH═CH2
832	CF2CF3	Cl	Me	CH2CH═CH2
833	CF2CF3	Cl	CH2CH═CH2	CH2CH═CH2
834	CF2CF3	Cl	H	CH2CH═CHCH3
835	CF2CF3	Cl	H	CH2—C(CH3)═CH2
836	CF2CF3	Cl	H	CH2—C≡CH
837	CF2CF3	Cl	Me	CH2—C≡CH
838	CF2CF3	Cl	H	CH(CH3)CH2CH3
839	CF2CF3	Cl	H	CH(CH3)cPr
840	CF2CF3	Cl	H	CH(CH3)(CH2)2CH3
841	CF2CF3	Cl	H	CH(CH3)(CH2)4CH3
842	CF2CF3	Cl	H	CH(CH3)(CH2)5CH3
843	CF2CF3	Cl	H	CH(CH2CH3)(CH2)3CH3
844	CF2CF3	Cl	H	CH(CH3)CH2CH(CH3)2
845	CF2CF3	Cl	H	CH(CH3)C(CH3)3
846	CF2CF3	Cl	H	CH(CH3)CH(CH3)2
847	CF2CF3	Cl	H	CH(CH3)CH2CH2CH(CH3)2
848	CF2CF3	Cl	H	CH(CH2CH3)2
849	CF2CF3	Cl	H	C(CH3)2CH2CH3
850	CF2CF3	Cl	H	C(CH3)2CH2C(CH3)3
851	CF2CF3	Cl	H	CH2—CH(OMe)2
852	CF2CF3	Cl	H	CH2—CH(OEt)2
853	CF2CF3	Cl	H	CH2CH2—OH
854	CF2CF3	Cl	H	CH2CH2—OMe
855	CF2CF3	Cl	Me	CH2CH2—OMe
856	CF2CF3	Cl	H	CH2CH2—OEt
857	CF2CF3	Cl	H	CH2CH2—SMe
858	CF2CF3	Cl	H	CH2CH2—CN
859	CF2CF3	Cl	H	CH2CH2—NMe2
860	CF2CF3	Cl	H	CH2CH2-morpholin-4-yl
861	CF2CF3	Cl	H	CH(CH3)CH2—OMe
862	CF2CF3	Cl	H	CH(CH3)CH2—NMe2
863	CF2CF3	Cl	H	CH2CH2CH2—OMe
864	CF2CF3	Cl	H	CH2CH2CH2—SMe
865	CF2CF3	Cl	H	CH2CH2CH2—OEt
866	CF2CF3	Cl	H	CH2CH2CH2—OiPr
867	CF2CF3	Cl	H	CH2CH2CH2—OBu
868	CF2CF3	Cl	H	CH2—COOCH3
869	CF2CF3	Cl	Me	CH2—COOCH3
870	CF2CF3	Cl	H	CH2CH2—COOCH3
871	CF2CF3	Cl	H	CH(COOCH3)2
872	CF2CF3	Cl	H	CH(COOEt)CH2—CH(CH3)2
873	CF2CF3	Cl	H	CH(COOMe)CH(CH3)2
874	CF2CF3	Cl	H	O—CH2CH3

TABLE 1-continued

Compounds of the formula (I)

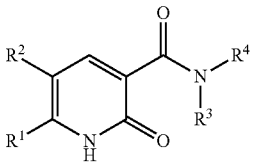


(I)

Ex.	R^1	R^2	R^3	R^4
875	CF2CF3	Cl	H	O—CH3
876	CF2CF3	Cl	H	O—CH2CH═CH2
877	CF2CF3	Cl	H	O—tBu
878	CF2CF3	Cl	H	O—Pr
879	CF2CF3	Cl	H	O—CH2cPr
880	CF2CF3	Cl	H	O—CH2CH(CH3)2
881	CF2CF3	Cl	H	O—CH2CF3
882	CF2CF3	Cl	H	O—CH(CH3)cPr
883	CF2CF3	Cl	H	O—CH2CH2Cl
884	CF2CF3	Cl	H	O—CH2C≡CH
885	CF2CF3	Cl	H	O—CH2C≡CCH3
886	CF2CF3	Cl	H	O—CH(CH3)C≡CH
887	CF2CF3	Cl	H	CH2—Ph
888	CF2CF3	Cl	Me	CH2—Ph
889	CF2CF3	Cl	H	CH2-pyridin-3-yl
890	CF2CF3	Cl	H	CH2-6-Cl-pyridin-3-yl
891	CF2CF3	Cl	H	CH(CH3)Ph
892	CF2CF3	Cl	H	CH2CH2—Ph
893	CF2CF3	Cl	H	CH2-2-CF3—Ph
894	CF2CF3	Cl	H	CH2CH2CHPh
895	CF2CF3	Cl		morpholin-4-yl
896	CF2CF3	Cl		piperidin-1-yl
897	CF2CF3	Cl		thiazolidin-3-yl
898	CF2CF3	Cl		pyrrolidin-1-yl
899	CF2CF3	Cl		2-methylpyrrolidin-1-yl
900	CF2CF3	Cl		═CH—N(CH3)2
901	CF2CF3	Cl		═C(CH3)N(CH3)2
902	CF2CF3	Cl		═CH—N(C2H5)2
903	CF2CF3	Cl		═C(CH3)N(C2H5)2
904	CF2CF3	Cl		═CH-piperidine
905	CF2CF3	Cl		═CH-morpholine
906	CF2CF3	Cl		═CH-pyrrolidine
907	CF2CF3	Cl	H	indan-1-yl
908	CF2CF3	Cl	H	tetrahydrofuran-2-ylmethyl
909	CF3	Br	H	H
910	CF3	Br	H	Me
911	CF3	Br	H	Et
912	CF3	Br	H	Pr
913	CF3	Br	H	iPr
914	CF3	Br	H	cPr
915	CF3	Br	H	Bu
916	CF3	Br	H	cBu
917	CF3	Br	H	tBu
918	CF3	Br	Me	Me
919	CF3	Br	Me	Et
920	CF3	Br	Me	Bu
921	CF3	Br	Me	Pr
922	CF3	Br	Me	iPr
923	CF3	Br	Et	Et
924	CF3	Br	Et	Pr
925	CF3	Br	Et	iPr
926	CF3	Br	Pr	Pr
927	CF3	Br	H	cPentyl
928	CF3	Br	H	cHexyl
929	CF3	Br	H	CH2(CH2)3CH3
930	CF3	Br	H	CH2(CH2)4CH3
931	CF3	Br	H	CH2—cPr
932	CF3	Br	H	CH2—CN
933	CF3	Br	H	CH2—C(CH3)3
934	CF3	Br	H	CH2CF2CF3
935	CF3	Br	H	CH2CF3
936	CF3	Br	H	CH2(CF2)2CF3
937	CF3	Br	H	CH2CH(CH3)CH2CH3
938	CF3	Br	H	CH2C(CH3)2CH2F
939	CF3	Br	H	CH2CH(CH3)2
940	CF3	Br	H	CH2CH(CH2CH3)2

TABLE 1-continued

Compounds of the formula (I)

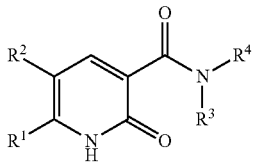


(I)

Ex.	R^1	R^2	R^3	R^4
941	CF3	Br	H	CH2CH2CH(CH3)2
942	CF3	Br	H	CH2CH2C(CH3)3
943	CF3	Br	H	CH2CH═CH2
944	CF3	Br	Me	CH2CH═CH2
945	CF3	Br	CH2CH═CH2	CH2CH═CH2
946	CF3	Br	H	CH2CH═CHCH3
947	CF3	Br	H	CH2—C(CH3)═CH2
948	CF3	Br	H	CH2—C≡CH
949	CF3	Br	Me	CH2—C≡CH
950	CF3	Br	H	CH(CH3)CH2CH3
951	CF3	Br	H	CH(CH3)cPr
952	CF3	Br	H	CH(CH3)(CH2)2CH3
953	CF3	Br	H	CH(CH3)(CH2)4CH3
954	CF3	Br	H	CH(CH3)(CH2)5CH3
955	CF3	Br	H	CH(CH2CH3)(CH2)3CH3
956	CF3	Br	H	CH(CH3)CH2CH(CH3)2
957	CF3	Br	H	CH(CH3)C(CH3)3
958	CF3	Br	H	CH(CH3)CH(CH3)2
959	CF3	Br	H	CH(CH3)CH2CH2CH(CH3)2
960	CF3	Br	H	CH(CH2CH3)2
961	CF3	Br	H	C(CH3)2CH2CH3
962	CF3	Br	H	C(CH3)2CH2C(CH3)3
963	CF3	Br	H	CH2—CH(OMe)2
964	CF3	Br	H	CH2—CH(OEt)2
965	CF3	Br	H	CH2CH2—OH
966	CF3	Br	H	CH2CH2—OMe
967	CF3	Br	Me	CH2CH2—OMe
968	CF3	Br	H	CH2CH2—OEt
969	CF3	Br	H	CH2CH2—SMe
970	CF3	Br	H	CH2CH2—CN
971	CF3	Br	H	CH2CH2—NMe2
972	CF3	Br	H	CH2CH2-morpholin-4-yl
973	CF3	Br	H	CH(CH3)CH2—OMe
974	CF3	Br	H	CH(CH3)CH2—NMe2
975	CF3	Br	H	CH2CH2CH2—OMe
976	CF3	Br	H	CH2CH2CH2—SMe
977	CF3	Br	H	CH2CH2CH2—OEt
978	CF3	Br	H	CH2CH2CH2—OiPr
979	CF3	Br	H	CH2CH2CH2—OBu
980	CF3	Br	H	CH2—COOCH3
981	CF3	Br	Me	CH2—COOCH3
982	CF3	Br	H	CH(CH3)COOMe
983	CF3	Br	H	CH(CH3)COOEt
984	CF3	Br	H	CH2CH2—COOCH3
985	CF3	Br	H	CH(COOCH3)2
986	CF3	Br	H	CH(COOEt)CH2—CH(CH3)2
987	CF3	Br	H	CH(COOMe)CH(CH3)2
988	CF3	Br	H	O—CH2CH3
989	CF3	Br	Me	O—CH3
990	CF3	Br	H	O—CH2CH═CH2
991	CF3	Br	H	O—tBu
992	CF3	Br	H	O—Pr
993	CF3	Br	H	O—CH2cPr
994	CF3	Br	H	O—CH2CH(CH3)2
995	CF3	Br	H	O—CH2CF3
996	CF3	Br	H	O—CH(CH3)cPr
997	CF3	Br	H	O—CH2CH2Cl
998	CF3	Br	H	O—CH2C≡CH
999	CF3	Br	H	O—CH2C≡CCH3
1000	CF3	Br	H	O—CH(CH3)C≡CH
1001	CF3	Br	H	CH2—Ph
1002	CF3	Br	Me	CH2—Ph
1003	CF3	Br	H	CH2-pyridin-3-yl
1004	CF3	Br	H	CH2-6-Cl-pyridin-3-yl
1005	CF3	Br	H	CH(CH3)Ph
1006	CF3	Br	H	CH2CH2—Ph

TABLE 1-continued

Compounds of the formula (I)

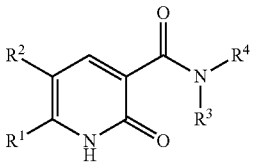


(I)

Ex.	R^1	R^2	R^3	R^4
1007	CF3	Br	H	CH2-2-CF3—Ph
1008	CF3	Br	H	CH2CH2CHPh2
1009	CF3	Br		morpholin-4-yl
1010	CF3	Br		piperidin-1-yl
1011	CF3	Br		thiazolidin-3-yl
1012	CF3	Br		pyrrolidin-1-yl
1013	CF3	Br		2-methylpyrrolidin-1-yl
1014	CF3	Br		═CH—N(CH3)2
1015	CF3	Br		═C(CH3)N(CH3)2
1016	CF3	Br		═CH—N(C2H5)2
1017	CF3	Br		═C(CH3)N(C2H5)2
1018	CF3	Br		═CH-piperidine
1019	CF3	Br		═CH-morpholine
1020	CF3	Br		═CH-pyrrolidine
1021	CF3	Br	H	indan-1-yl
1022	CF3	Br	H	tetrahydrofuran-2-ylmethyl
1023	CF2Cl	Br	H	H
1024	CF2Cl	Br	H	Me
1025	CF2Cl	Br	H	Et
1026	CF2Cl	Br	H	Pr
1027	CF2Cl	Br	H	iPr
1028	CF2Cl	Br	H	cPr
1029	CF2Cl	Br	H	Bu
1030	CF2Cl	Br	H	cBu
1031	CF2Cl	Br	H	tBu
1032	CF2Cl	Br	Me	Me
1033	CF2Cl	Br	Me	Et
1034	CF2Cl	Br	Me	Bu
1035	CF2Cl	Br	Me	Pr
1036	CF2Cl	Br	Me	iPr
1037	CF2Cl	Br	Et	Et
1038	CF2Cl	Br	Et	Pr
1039	CF2Cl	Br	Et	iPr
1040	CF2Cl	Br	Pr	Pr
1041	CF2Cl	Br	H	cPentyl
1042	CF2Cl	Br	H	cHexyl
1043	CF2Cl	Br	H	CH2(CH2)3CH3
1044	CF2Cl	Br	H	CH2(CH2)4CH3
1045	CF2Cl	Br	H	CH2—cPr
1046	CF2Cl	Br	H	CH2—CN
1047	CF2Cl	Br	H	CH2—C(CH3)3
1048	CF2Cl	Br	H	CH2CF2CF3
1049	CF2Cl	Br	H	CH2CF3
1050	CF2Cl	Br	H	CH2(CF2)2CF3
1051	CF2Cl	Br	H	CH2CH(CH3)CH2CH3
1052	CF2Cl	Br	H	CH2C(CH3)2CH2F
1053	CF2Cl	Br	H	CH2CH(CH3)2
1054	CF2Cl	Br	H	CH2CH(CH2CH3)2
1055	CF2Cl	Br	H	CH2CH2CH(CH3)2
1056	CF2Cl	Br	H	CH2CH2C(CH3)3
1057	CF2Cl	Br	H	CH2CH═CH2
1058	CF2Cl	Br	Me	CH2CH═CH2
1059	CF2Cl	Br	CH2CH═CH2	CH2CH═CH2
1060	CF2Cl	Br	H	CH2CH═CHCH3
1061	CF2Cl	Br	H	CH2—C(CH3)═CH2
1062	CF2Cl	Br	H	CH2—C≡CH
1063	CF2Cl	Br	Me	CH2—C≡CH
1064	CF2Cl	Br	H	CH(CH3)CH2CH3
1065	CF2Cl	Br	H	CH(CH3)cPr
1066	CF2Cl	Br	H	CH(CH3)(CH2)2CH3
1067	CF2Cl	Br	H	CH(CH3)(CH2)4CH3
1068	CF2Cl	Br	H	CH(CH3)(CH2)5CH3
1069	CF2Cl	Br	H	CH(CH2CH3)(CH2)3CH3
1070	CF2Cl	Br	H	CH(CH3)CH2CH(CH3)2
1071	CF2Cl	Br	H	CH(CH3)C(CH3)3
1072	CF2Cl	Br	H	CH(CH3)CH(CH3)2

TABLE 1-continued

Compounds of the formula (I)

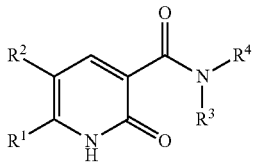


(I)

Ex.	R^1	R^2	R^3	R^4
1073	CF2Cl	Br	H	CH(CH3)CH2CH2CH(CH3)2
1074	CF2Cl	Br	H	CH(CH2CH3)2
1075	CF2Cl	Br	H	C(CH3)2CH2CH3
1076	CF2Cl	Br	H	C(CH3)2CH2C(CH3)3
1077	CF2Cl	Br	H	CH2—CH(OMe)2
1078	CF2Cl	Br	H	CH2—CH(OEt)2
1079	CF2Cl	Br	H	CH2CH2—OH
1080	CF2Cl	Br	H	CH2CH2—OMe
1081	CF2Cl	Br	Me	CH2CH2—OMe
1082	CF2Cl	Br	H	CH2CH2—OEt
1083	CF2Cl	Br	H	CH2CH2—SMe
1084	CF2Cl	Br	H	CH2CH2—CN
1085	CF2Cl	Br	H	CH2CH2—NMe2
1086	CF2Cl	Br	H	CH2CH2-morpholin-4-yl
1087	CF2Cl	Br	H	CH(CH3)CH2—OMe
1088	CF2Cl	Br	H	CH(CH3)CH2—NMe2
1089	CF2Cl	Br	H	CH2CH2CH2—OMe
1090	CF2Cl	Br	H	CH2CH2CH2—SMe
1091	CF2Cl	Br	H	CH2CH2CH2—OEt
1092	CF2Cl	Br	H	CH2CH2CH2—OiPr
1093	CF2Cl	Br	H	CH2CH2CH2—OBu
1094	CF2Cl	Br	H	CH2—COOCH3
1095	CF2Cl	Br	Me	CH2—COOCH3
1096	CF2Cl	Br	H	CH(CH3)COOMe
1097	CF2Cl	Br	H	CH(CH3)COOEt
1098	CF2Cl	Br	H	CH2CH2—COOCH3
1099	CF2Cl	Br	H	CH(COOCH3)2
1100	CF2Cl	Br	H	CH(COOEt)CH2—CH(CH3)2
1101	CF2Cl	Br	H	CH(COOMe)CH(CH3)2
1102	CF2Cl	Br	H	O—CH2CH3
1103	CF2Cl	Br	Me	O—CH3
1104	CF2Cl	Br	H	O—CH2CH═CH2
1105	CF2Cl	Br	H	O—tBu
1106	CF2Cl	Br	H	O—Pr
1107	CF2Cl	Br	H	O—CH2cPr
1108	CF2Cl	Br	H	O—CH2CH(CH3)2
1109	CF2Cl	Br	H	O—CH2CF3
1110	CF2Cl	Br	H	O—CH(CH3)cPr
1111	CF2Cl	Br	H	O—CH2CH2Cl
1112	CF2Cl	Br	H	O—CH2C═CH
1113	CF2Cl	Br	H	O—CH2C═CCH3
1114	CF2Cl	Br	H	O—CH(CH3)C═CH
1115	CF2Cl	Br	H	CH2—Ph
1116	CF2Cl	Br	Me	CH2—Ph
1117	CF2Cl	Br	H	CH2-pyridin-3-yl
1118	CF2Cl	Br	H	CH2-6-Cl-pyridin-3-yl
1119	CF2Cl	Br	H	CH(CH3)Ph
1120	CF2Cl	Br	H	CH2CH2—Ph
1121	CF2Cl	Br	H	CH2-2-CF3—Ph
1122	CF2Cl	Br	H	CH2CH2CHPh2
1123	CF2Cl	Br		morpholin-4-yl
1124	CF2Cl	Br		piperidin-1-yl
1125	CF2Cl	Br		thiazolidin-3-yl
1126	CF2Cl	Br		pyrrolidin-1-yl
1127	CF2Cl	Br		2-methylpyrrolidin-1-yl
1128	CF2Cl	Br		═CH—N(CH3)2
1129	CF2Cl	Br		═C(CH3)N(CH3)2
1130	CF2Cl	Br		═CH—N(C2H5)2
1131	CF2Cl	Br		═C(CH3)N(C2H5)2
1132	CF2Cl	Br		═CH-piperidine
1133	CF2Cl	Br		═CH-morpholine
1134	CF2Cl	Br		═CH-pyrrolidine
1135	CF2Cl	Br	H	indan-1-yl
1136	CF2Cl	Br	H	tetrahydrofuran-2-ylmethyl
1137	CHF2	Br	H	H
1138	CHF2	Br	H	Me

TABLE 1-continued

Compounds of the formula (I)

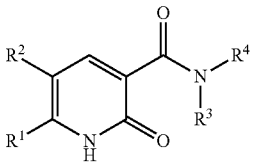


(I)

Ex.	R^1	R^2	R^3	R^4
1139	CHF2	Br	H	Et
1140	CHF2	Br	H	Pr
1141	CHF2	Br	H	iPr
1142	CHF2	Br	H	cPr
1143	CHF2	Br	H	Bu
1144	CHF2	Br	H	cBu
1145	CHF2	Br	H	tBu
1146	CHF2	Br	Me	Me
1147	CHF2	Br	Me	Et
1148	CHF2	Br	Me	Bu
1149	CHF2	Br	Me	Pr
1150	CHF2	Br	Me	iPr
1151	CHF2	Br	Et	Et
1152	CHF2	Br	Et	Pr
1153	CHF2	Br	Et	iPr
1154	CHF2	Br	Pr	Pr
1155	CHF2	Br	H	cPentyl
1156	CHF2	Br	H	cHexyl
1157	CHF2	Br	H	CH2(CH2)3CH3
1158	CHF2	Br	H	CH2(CH2)4CH3
1159	CHF2	Br	H	CH2—cPr
1160	CHF2	Br	H	CH2—CN
1161	CHF2	Br	H	CH2—C(CH3)3
1162	CHF2	Br	H	CH2CF2CF3
1163	CHF2	Br	H	CH2CF3
1164	CHF2	Br	H	CH2(CF2)2CF3
1165	CHF2	Br	H	CH2CH(CH3)CH2CH3
1166	CHF2	Br	H	CH2C(CH3)2CH2F
1167	CHF2	Br	H	CH2CH(CH3)2
1168	CHF2	Br	H	CH2CH(CH2CH3)2
1169	CHF2	Br	H	CH2CH2CH(CH3)2
1170	CHF2	Br	H	CH2CH2C(CH3)3
1171	CHF2	Br	H	CH2CH═CH2
1172	CHF2	Br	Me	CH2CH═CH2
1173	CHF2	Br	CH2CH═CH2	CH2CH═CH2
1174	CHF2	Br	H	CH2CH═CHCH3
1175	CHF2	Br	H	CH2—C(CH3)═CH2
1176	CHF2	Br	H	CH2—C≡CH
1177	CHF2	Br	Me	CH2—C≡CH
1178	CHF2	Br	H	CH(CH3)CH2CH3
1179	CHF2	Br	H	CH(CH3)cPr
1180	CHF2	Br	H	CH(CH3)(CH2)2CH3
1181	CHF2	Br	H	CH(CH3)(CH2)4CH3
1182	CHF2	Br	H	CH(CH3)(CH2)5CH3
1183	CHF2	Br	H	CH(CH2CH3)(CH2)3CH3
1184	CHF2	Br	H	CH(CH3)CH2CH(CH3)2
1185	CHF2	Br	H	CH(CH3)C(CH3)3
1186	CHF2	Br	H	CH(CH3)CH(CH3)2
1187	CHF2	Br	H	CH(CH3)CH2CH2CH(CH3)2
1188	CHF2	Br	H	CH(CH2CH3)2
1189	CHF2	Br	H	C(CH3)2CH2CH3
1190	CHF2	Br	H	C(CH3)2CH2C(CH3)3
1191	CHF2	Br	H	CH2—CH(OMe)2
1192	CHF2	Br	H	CH2—CH(OEt)2
1193	CHF2	Br	H	CH2CH2—OH
1194	CHF2	Br	H	CH2CH2—OMe
1195	CHF2	Br	Me	CH2CH2—OMe
1196	CHF2	Br	H	CH2CH2—OEt
1197	CHF2	Br	H	CH2CH2—SMe
1198	CHF2	Br	H	CH2CH2—CN
1199	CHF2	Br	H	CH2CH2—NMe2
1200	CHF2	Br	H	CH2CH2-morpholin-4-yl
1201	CHF2	Br	H	CH(CH3)CH2—OMe
1202	CHF2	Br	H	CH(CH3)CH2—NMe2
1203	CHF2	Br	H	CH2CH2CH2—OMe
1204	CHF2	Br	H	CH2CH2CH2—SMe

TABLE 1-continued

Compounds of the formula (I)

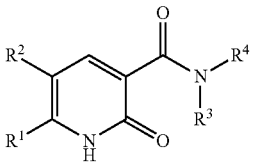


(I)

Ex.	R^1	R^2	R^3	R^4
1205	CHF2	Br	H	CH2CH2CH2—OEt
1206	CHF2	Br	H	CH2CH2CH2—OiPr
1207	CHF2	Br	H	CH2CH2CH2—OBu
1208	CHF2	Br	H	CH2—COOCH3
1209	CHF2	Br	Me	CH2—COOCH3
1210	CHF2	Br	H	CH(CH3)COOMe
1211	CHF2	Br	H	CH(CH3)COOEt
1212	CHF2	Br	H	CH2CH2—COOCH3
1213	CHF2	Br	H	CH(COOCH3)2
1214	CHF2	Br	H	CH(COOEt)CH2—CH(CH3)2
1215	CHF2	Br	H	CH(COOMe)CH(CH3)2
1216	CHF2	Br	H	O—CH2CH3
1217	CHF2	Br	Me	O—CH3
1218	CHF2	Br	H	O—CH2CH═CH2
1219	CHF2	Br	H	O—tBu
1220	CHF2	Br	H	O—Pr
1221	CHF2	Br	H	O—CH2cPr
1222	CHF2	Br	H	O—CH2CH(CH3)2
1223	CHF2	Br	H	O—CH2CF3
1224	CHF2	Br	H	O—CH(CH3)cPr
1225	CHF2	Br	H	O—CH2CH2Cl
1226	CHF2	Br	H	O—CH2C≡CH
1227	CHF2	Br	H	O—CH2C≡CCH3
1228	CHF2	Br	H	O—CH(CH3)C≡CH
1229	CHF2	Br	H	CH2—Ph
1230	CHF2	Br	Me	CH2—Ph
1231	CHF2	Br	H	CH2-pyridin-3-yl
1232	CHF2	Br	H	CH2-6-Cl-pyridin-3-yl
1233	CHF2	Br	H	CH(CH3)Ph
1234	CHF2	Br	H	CH2CH2—Ph
1235	CHF2	Br	H	CH2-2-CF3—Ph
1236	CHF2	Br	H	CH2CH2CHPh2
1237	CHF2	Br		morpholin-4-yl
1238	CHF2	Br		piperidin-1-yl
1239	CHF2	Br		thiazolidin-3-yl
1240	CHF2	Br		pyrrolidin-1-yl
1241	CHF2	Br		2-methylpyrrolidin-1-yl
1242	CHF2	Br		═CH—N(CH3)2
1243	CHF2	Br		═C(CH3)N(CH3)2
1244	CHF2	Br		═CH—N(C2H5)2
1245	CHF2	Br		═C(CH3)N(C2H5)2
1246	CHF2	Br		═CH-piperidine
1247	CHF2	Br		═CH-morpholine
1248	CHF2	Br		═CH-pyrrolidine
1249	CHF2	Br	H	indan-1-yl
1250	CHF2	Br	H	tetrahydrofuran-2-yl
1251	CF2CF3	Br	H	H
1252	CF2CF3	Br	H	Me
1253	CF2CF3	Br	H	Ey
1254	CF2CF3	Br	H	Pr
1255	CF2CF3	Br	H	iPr
1256	CF2CF3	Br	H	cPr
1257	CF2CF3	Br	H	Bu
1258	CF2CF3	Br	H	cBu
1259	CF2CF3	Br	H	tBu
1260	CF2CF3	Br	Me	Me
1261	CF2CF3	Br	Me	Et
1262	CF2CF3	Br	Me	Bu
1263	CF2CF3	Br	Me	Pr
1264	CF2CF3	Br	Me	iPr
1265	CF2CF3	Br	Et	Et
1266	CF2CF3	Br	Et	Pr
1267	CF2CF3	Br	Et	iPr
1268	CF2CF3	Br	Pr	Pr
1269	CF2CF3	Br	H	cPentyl
1270	CF2CF3	Br	H	cHexyl

TABLE 1-continued

Compounds of the formula (I)

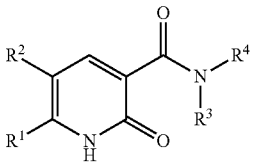


(I)

Ex.	R^1	R^2	R^3	R^4
1271	CF2CF3	Br	H	CH2(CH2)3CH3
1272	CF2CF3	Br	H	CH2(CH2)4CH3
1273	CF2CF3	Br	H	CH2—cPr
1274	CF2CF3	Br	H	CH2—CN
1275	CF2CF3	Br	H	CH2—C(CH3)3
1276	CF2CF3	Br	H	CH2CF2CF3
1277	CF2CF3	Br	H	CH2CF3
1278	CF2CF3	Br	H	CH2(CF2)2CF3
1279	CF2CF3	Br	H	CH2CH(CH3)CH2CH3
1280	CF2CF3	Br	H	CH2C(CH3)2CH2F
1281	CF2CF3	Br	H	CH2CH(CH3)2
1282	CF2CF3	Br	H	CH2CH(CH2CH3)2
1283	CF2CF3	Br	H	CH2CH2CH(CH3)2
1284	CF2CF3	Br	H	CH2CH2C(CH3)3
1285	CF2CF3	Br	H	CH2CH═CH2
1286	CF2CF3	Br	Me	CH2CH═CH2
1287	CF2CF3	Br	CH2CH═CH2	CH2CH═CH2
1288	CF2CF3	Br	H	CH2CH═CHCH3
1289	CF2CF3	Br	H	CH2—C(CH3)═CH2
1290	CF2CF3	Br	H	CH2—C≡CH
1291	CF2CF3	Br	Me	CH2—C≡CH
1292	CF2CF3	Br	H	CH(CH3)CH2CH3
1293	CF2CF3	Br	H	CH(CH3)cPr
1294	CF2CF3	Br	H	CH(CH3)(CH2)2CH3
1295	CF2CF3	Br	H	CH(CH3)(CH2)4CH3
1296	CF2CF3	Br	H	CH(CH3)(CH2)5CH3
1297	CF2CF3	Br	H	CH(CH2CH3)(CH2)3CH3
1298	CF2CF3	Br	H	CH(CH3)CH2CH(CH3)2
1299	CF2CF3	Br	H	CH(CH3)C(CH3)3
1300	CF2CF3	Br	H	CH(CH3)CH(CH3)2
1301	CF2CF3	Br	H	CH(CH3)CH2CH2CH(CH3)2
1302	CF2CF3	Br	H	CH(CH2CH3)2
1303	CF2CF3	Br	H	C(CH3)2CH2CH3
1304	CF2CF3	Br	H	C(CH3)2CH2C(CH3)3
1305	CF2CF3	Br	H	CH2—CH(OMe)2
1306	CF2CF3	Br	H	CH2—CH(OEt)2
1307	CF2CF3	Br	H	CH2CH2—OH
1308	CF2CF3	Br	H	CH2CH2—OMe
1309	CF2CF3	Br	Me	CH2CH2—OMe
1310	CF2CF3	Br	H	CH2CH2—OEt
1311	CF2CF3	Br	H	CH2CH2—SMe
1312	CF2CF3	Br	H	CH2CH2—CN
1313	CF2CF3	Br	H	CH2CH2—NMe2
1314	CF2CF3	Br	H	CH2CH2-morpholin-4-yl
1315	CF2CF3	Br	H	CH(CH3)CH2—OMe
1316	CF2CF3	Br	H	CH(CH3)CH2—NMe2
1317	CF2CF3	Br	H	CH2CH2CH2—OMe
1318	CF2CF3	Br	H	CH2CH2CH2—SMe
1319	CF2CF3	Br	H	CH2CH2CH2—OEt
1320	CF2CF3	Br	H	CH2CH2CH2—OiPr
1321	CF2CF3	Br	H	CH2CH2CH2—OBu
1322	CF2CF3	Br	H	CH2—COOCH3
1323	CF2CF3	Br	Me	CH2—COOCH3
1324	CF2CF3	Br	H	CH(CH3)COOMe
1325	CF2CF3	Br	H	CH(CH3)COOEt
1326	CF2CF3	Br	H	CH2CH2—COOCH3
1327	CF2CF3	Br	H	CH(COOCH3)2
1328	CF2CF3	Br	H	CH(COOEt)CH2—CH(CH3)2
1329	CF2CF3	Br	H	CH(COOMe)CH(CH3)2
1330	CF2CF3	Br	H	O—CH2CH3
1331	CF2CF3	Br	Me	O—CH3
1332	CF2CF3	Br	H	O—CH2CH═CH2
1333	CF2CF3	Br	H	O—tBu
1334	CF2CF3	Br	H	O—Pr
1335	CF2CF3	Br	H	O—CH2cPr
1336	CF2CF3	Br	H	O—CH2CH(CH3)2

TABLE 1-continued

Compounds of the formula (I)

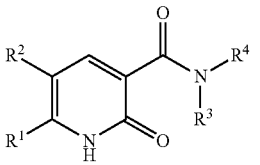


(I)

Ex.	R^1	R^2	R^3	R^4
1337	CF2CF3	Br	H	O—CH2CF3
1338	CF2CF3	Br	H	O—CH(CH3)cPr
1339	CF2CF3	Br	H	O—CH2CH2Cl
1340	CF2CF3	Br	H	O—CH2C≡CH
1341	CF2CF3	Br	H	O—CH2C≡CCH3
1342	CF2CF3	Br	H	O—CH(CH3)C≡CH
1343	CF2CF3	Br	H	CH2—Ph
1344	CF2CF3	Br	Me	CH2—Ph
1345	CF2CF3	Br	H	CH2-pyridin-3-yl
1346	CF2CF3	Br	H	CH2-6-Cl-pyridin-3-yl
1347	CF2CF3	Br	H	CH(CH3)Ph
1348	CF2CF3	Br	H	CH2CH2—Ph
1349	CF2CF3	Br	H	CH2-2-CF3—Ph
1350	CF2CF3	Br	H	CH2CH2CHPh2
1351	CF2CF3	Br		morpholin-4-yl
1352	CF2CF3	Br		piperidin-1-yl
1353	CF2CF3	Br		thiazolidin-3-yl
1354	CF2CF3	Br		pyrrolidin-1-yl
1355	CF2CF3	Br		2-methylpyrrolidin-1-yl
1356	CF2CF3	Br		═CH—N(CH3)2
1357	CF2CF3	Br		═C(CH3)N(CH3)2
1358	CF2CF3	Br		═CH—N(C2H5)2
1359	CF2CF3	Br		═C(CH3)N(C2H5)2
1360	CF2CF3	Br		═CH-piperidine
1361	CF2CF3	Br		═CH-morpholine
1362	CF2CF3	Br		═CH-pyrrolidine
1363	CF2CF3	Br	H	indan-1-yl
1364	CF2CF3	Br	H	tetrahydrofuran-2-ylmethyl
1365	CF2CF3	I	H	H
1366	CF3	I	H	H
1367	CF2CHF2	H	H	H
1368	CF2CHF2	H	H	Me
1369	CF2CHF2	H	H	Et
1370	CF2CHF2	H	H	Pr
1371	CF2CHF2	H	H	iPr
1372	CF2CHF2	H	H	cPr
1373	CF2CHF2	H	H	Bu
1374	CF2CHF2	H	H	cBu
1375	CF2CHF2	H	H	tBu
1376	CF2CHF2	H	Me	Me
1377	CF2CHF2	H	Me	Et
1378	CF2CHF2	H	Me	Bu
1379	CF2CHF2	H	Me	Pr
1380	CF2CHF2	H	Me	iPr
1381	CF2CHF2	H	Et	Et
1382	CF2CHF2	H	Et	Pr
1383	CF2CHF2	H	Et	iPr
1384	CF2CHF2	H	Pr	Pr
1385	CF2CHF2	H	H	cPentyl
1386	CF2CHF2	H	H	cHexyl
1387	CF2CHF2	H	H	CH2(CH2)3CH3
1388	CF2CHF2	H	H	CH2(CH2)4CH3
1389	CF2CHF2	H	H	CH2—cPr
1390	CF2CHF2	H	H	CH2—CN
1391	CF2CHF2	H	H	CH2—C(CH3)3
1392	CF2CHF2	H	H	CH2CF2CF3
1393	CF2CHF2	H	H	CH2CF3
1394	CF2CHF2	H	H	CH2(CF2)2CF3
1395	CF2CHF2	H	H	CH2CH(CH3)CH2CH3
1396	CF2CHF2	H	H	CH2C(CH3)2CH2F
1397	CF2CHF2	H	H	CH2CH(CH3)2
1398	CF2CHF2	H	H	CH2CH(CH2CH3)2
1399	CF2CHF2	H	H	CH2CH2CH(CH3)2
1400	CF2CHF2	H	H	CH2CH2C(CH3)3
1401	CF2CHF2	H	H	CH2CH═CH2
1402	CF2CHF2	H	Me	CH2CH═CH2

TABLE 1-continued

Compounds of the formula (I)

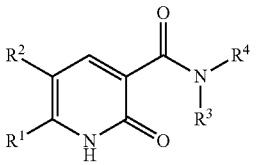


(I)

Ex.	R^1	R^2	R^3	R^4
1403	CF2CHF2	H	CH2CH═CH2	CH2CH═CH2
1404	CF2CHF2	H	H	CH2CH═CHCH3
1405	CF2CHF2	H	H	CH2—C(CH3)═CH2
1406	CF2CHF2	H	H	CH2—C≡CH
1407	CF2CHF2	H	Me	CH2—C≡CH
1408	CF2CHF2	H	H	CH(CH3)CH2CH3
1409	CF2CHF2	H	H	CH(CH3)cPr
1410	CF2CHF2	H	H	CH(CH3)(CH2)2CH3
1411	CF2CHF2	H	H	CH(CH3)(CH2)4CH3
1412	CF2CHF2	H	H	CH(CH3)(CH2)5CH3
1413	CF2CHF2	H	H	CH(CH2CH3)(CH2)3CH3
1414	CF2CHF2	H	H	CH(CH3)CH2CH(CH3)2
1415	CF2CHF2	H	H	CH(CH3)C(CH3)3
1416	CF2CHF2	H	H	CH(CH3)CH(CH3)2
1417	CF2CHF2	H	H	CH(CH3)CH2CH2CH(CH3)2
1418	CF2CHF2	H	H	CH(CH2CH3)2
1419	CF2CHF2	H	H	C(CH3)2CH2CH3
1420	CF2CHF2	H	H	C(CH3)2CH2C(CH3)3
1421	CF2CHF2	H	H	CH2—CH(OMe)2
1422	CF2CHF2	H	H	CH2—CH(OEt)2
1423	CF2CHF2	H	H	CH2CH2—OH
1424	CF2CHF2	H	H	CH2CH2—OMe
1425	CF2CHF2	H	Me	CH2CH2—OMe
1426	CF2CHF2	H	H	CH2CH2—OEt
1427	CF2CHF2	H	H	CH2CH2—SMe
1428	CF2CHF2	H	H	CH2CH2—CN
1429	CF2CHF2	H	H	CH2CH2—NMe2
1430	CF2CHF2	H	H	CH2CH2-morpholin-4-yl
1431	CF2CHF2	H	H	CH(CH3)CH2—OMe
1432	CF2CHF2	H	H	CH(CH3)CH2—NMe2
1433	CF2CHF2	H	H	CH2CH2CH2—OMe
1434	CF2CHF2	H	H	CH2CH2CH2—SMe
1435	CF2CHF2	H	H	CH2CH2CH2—OEt
1436	CF2CHF2	H	H	CH2CH2CH2—OiPr
1437	CF2CHF2	H	H	CH2CH2CH2—OBu
1438	CF2CHF2	H	H	CH2—COOCH3
1439	CF2CHF2	H	Me	CH2—COOCH3
1440	CF2CHF2	H	H	CH(CH3)COOMe
1441	CF2CHF2	H	H	CH(CH3)COOEt
1442	CF2CHF2	H	H	CH2CH2—COOCH3
1443	CF2CHF2	H	H	CH(COOCH3)2
1444	CF2CHF2	H	H	CH(COOEt)CH2—CH(CH3)2
1445	CF2CHF2	H	H	CH(COOMe)CH(CH3)2
1446	CF2CHF2	H	H	O—CH2CH3
1447	CF2CHF2	H	H	O—CH3
1448	CF2CHF2	H	H	O—CH2CH═CH2
1449	CF2CHF2	H	H	O—tBu
1450	CF2CHF2	H	H	O—Pr
1451	CF2CHF2	H	H	O—CH2cPr
1452	CF2CHF2	H	H	O—CH2CH(CH3)2
1453	CF2CHF2	H	H	O—CH2CF3
1454	CF2CHF2	H	H	O—CH(CH3)cPr
1455	CF2CHF2	H	H	O—CH2CH2Cl
1456	CF2CHF2	H	H	O—CH2C≡CH
1457	CF2CHF2	H	H	O—CH2C≡CCH3
1458	CF2CHF2	H	H	O—CH(CH3)C≡CH
1459	CF2CHF2	H	H	CH2—Ph
1460	CF2CHF2	H	Me	CH2—Ph
1461	CF2CHF2	H	H	CH2-pyridin-3-yl
1462	CF2CHF2	H	H	CH2-6-Cl-pyridin-3-yl
1463	CF2CHF2	H	H	CH(CH3)Ph
1464	CF2CHF2	H	H	CH2CH2—Ph
1465	CF2CHF2	H	H	CH2-2-CF3—Ph
1466	CF2CHF2	H	H	CH2CH2CHPh
1467	CF2CHF2	H		morpholin-4-yl
1468	CF2CHF2	H		piperidin-1-yl

TABLE 1-continued

Compounds of the formula (I)

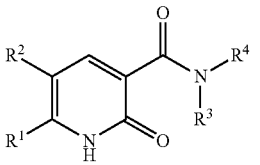


(I)

Ex.	R^1	R^2	R^3	R^4
1469	CF2CHF2	H		thiazolidin-3-yl
1470	CF2CHF2	H		pyrrolidin-1-yl
1471	CF2CHF2	H		2-methylpyrrolidin-1-yl
1472	CF2CHF2	H		═CH—N(CH3)2
1473	CF2CHF2	H		═C(CH3)N(CH3)2
1474	CF2CHF2	H		═CH—N(C2H5)2
1475	CF2CHF2	H		═C(CH3)N(C2H5)2
1476	CF2CHF2	H		═CH-piperidine
1477	CF2CHF2	H		═CH-morpholine
1478	CF2CHF2	H		═CH-pyrrolidine
1479	CF2CHF2	H	H	indan-1-yl
1480	CF2CHF2	H	H	tetrahydrofuran-2-ylmethyl
1481	CF2CF2Cl	H	H	H
1482	CF2CF2Cl	H	H	Me
1483	CF2CF2Cl	H	H	Et
1484	CF2CF2Cl	H	H	Pr
1485	CF2CF2Cl	H	H	iPr
1486	CF2CF2Cl	H	H	cPr
1487	CF2CF2Cl	H	H	Bu
1488	CF2CF2Cl	H	H	cBu
1489	CF2CF2Cl	H	H	tBu
1490	CF2CF2Cl	H	Me	Me
1491	CF2CF2Cl	H	Me	Et
1492	CF2CF2Cl	H	Me	Bu
1493	CF2CF2Cl	H	Me	Pr
1494	CF2CF2Cl	H	Me	iPr
1495	CF2CF2Cl	H	Et	Et
1496	CF2CF2Cl	H	Et	Pr
1497	CF2CF2Cl	H	Et	iPr
1498	CF2CF2Cl	H	Pr	Pr
1499	CF2CF2Cl	H	H	cPentyl
1500	CF2CF2Cl	H	H	cHexyl
1501	CF2CF2Cl	H	H	CH2(CH2)3CH3
1502	CF2CF2Cl	H	H	CH2(CH2)4CH3
1503	CF2CF2Cl	H	H	CH2—cPr
1504	CF2CF2Cl	H	H	CH2—CN
1505	CF2CF2Cl	H	H	CH2—C(CH3)3
1506	CF2CF2Cl	H	H	CH2CF2CF3
1507	CF2CF2Cl	H	H	CH2CF3
1508	CF2CF2Cl	H	H	CH2(CF2)2CF3
1509	CF2CF2Cl	H	H	CH2CH(CH3)CH2CH3
1510	CF2CF2Cl	H	H	CH2C(CH3)2CH2F
1511	CF2CF2Cl	H	H	CH2CH(CH3)2
1512	CF2CF2Cl	H	H	CH2CH(CH2CH3)2
1513	CF2CF2Cl	H	H	CH2CH2CH(CH3)2
1514	CF2CF2Cl	H	H	CH2CH2C(CH3)3
1515	CF2CF2Cl	H	H	CH2CH═CH2
1516	CF2CF2Cl	H	Me	CH2CH═CH2
1517	CF2CF2Cl	H	CH2CH═CH2	CH2CH═CH2
1518	CF2CF2Cl	H	H	CH2CH═CHCH3
1519	CF2CF2Cl	H	H	CH2—C(CH3)═CH2
1520	CF2CF2Cl	H	H	CH2—C≡CH
1521	CF2CF2Cl	H	Me	CH2—C≡CH
1522	CF2CF2Cl	H	H	CH(CH3)CH2CH3
1523	CF2CF2Cl	H	H	CH(CH3)cPr
1524	CF2CF2Cl	H	H	CH(CH3)(CH2)2CH3
1525	CF2CF2Cl	H	H	CH(CH3)(CH2)4CH3
1526	CF2CF2Cl	H	H	CH(CH3)(CH2)5CH3
1527	CF2CF2Cl	H	H	CH(CH2CH3)(CH2)3CH3
1528	CF2CF2Cl	H	H	CH(CH3)CH2CH(CH3)2
1529	CF2CF2Cl	H	H	CH(CH3)C(CH3)3
1530	CF2CF2Cl	H	H	CH(CH3)CH(CH3)2
1531	CF2CF2Cl	H	H	CH(CH3)CH2CH2CH(CH3)2
1532	CF2CF2Cl	H	H	CH(CH2CH3)2
1533	CF2CF2Cl	H	H	C(CH3)2CH2CH3
1534	CF2CF2Cl	H	H	C(CH3)2CH2C(CH3)3

TABLE 1-continued

Compounds of the formula (I)

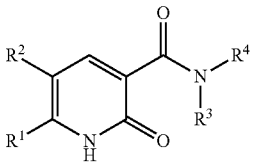


(I)

Ex.	R^1	R^2	R^3	R^4
1535	CF2CF2Cl	H	H	CH2—CH(OMe)2
1536	CF2CF2Cl	H	H	CH2—CH(OEt)2
1537	CF2CF2Cl	H	H	CH2CH2—OH
1538	CF2CF2Cl	H	H	CH2CH2—OMe
1539	CF2CF2Cl	H	Me	CH2CH2—OMe
1540	CF2CF2Cl	H	H	CH2CH2—OEt
1541	CF2CF2Cl	H	H	CH2CH2—SMe
1542	CF2CF2Cl	H	H	CH2CH2—CN
1543	CF2CF2Cl	H	H	CH2CH2—NMe2
1544	CF2CF2Cl	H	H	CH2CH2-morpholin-4-yl
1545	CF2CF2Cl	H	H	CH(CH3)CH2—OMe
1546	CF2CF2Cl	H	H	CH(CH3)CH2—NMe2
1547	CF2CF2Cl	H	H	CH2CH2CH2—OMe
1548	CF2CF2Cl	H	H	CH2CH2CH2—SMe
1549	CF2CF2Cl	H	H	CH2CH2CH2—OEt
1550	CF2CF2Cl	H	H	CH2CH2CH2—OiPr
1551	CF2CF2Cl	H	H	CH2CH2CH2—OBu
1552	CF2CF2Cl	H	H	CH2—COOCH3
1553	CF2CF2Cl	H	Me	CH2—COOCH3
1554	CF2CF2Cl	H	H	CH(CH3)COOMe
1555	CF2CF2Cl	H	H	CH(CH3)COOEt
1556	CF2CF2Cl	H	H	CH2CH2—COOCH3
1557	CF2CF2Cl	H	H	CH(COOCH3)2
1558	CF2CF2Cl	H	H	CH(COOEt)CH2—CH(CH3)2
1559	CF2CF2Cl	H	H	CH(COOMe)CH(CH3)2
1560	CF2CF2Cl	H	H	O—CH2CH3
1561	CF2CF2Cl	H	H	O—CH3
1562	CF2CF2Cl	H	H	O—CH2CH═CH2
1563	CF2CF2Cl	H	H	O—tBu
1564	CF2CF2Cl	H	H	O—Pr
1565	CF2CF2Cl	H	H	O—CH2cPr
1566	CF2CF2Cl	H	H	O—CH2CH(CH3)2
1567	CF2CF2Cl	H	H	O—CH2CF3
1568	CF2CF2Cl	H	H	O—CH(CH3)cPr
1569	CF2CF2Cl	H	H	O—CH2CH2Cl
1570	CF2CF2Cl	H	H	O—CH2C≡CH
1571	CF2CF2Cl	H	H	O—CH2C═CCH3
1572	CF2CF2Cl	H	H	O—CH(CH3)C═CH
1573	CF2CF2Cl	H	H	CH2—Ph
1574	CF2CF2Cl	H	Me	CH2—Ph
1575	CF2CF2Cl	H	H	CH2-pyridin-3-yl
1576	CF2CF2Cl	H	H	CH2-6-Cl-pyridin-3-yl
1577	CF2CF2Cl	H	H	CH(CH3)Ph
1578	CF2CF2Cl	H	H	CH2CH2—Ph
1579	CF2CF2Cl	H	H	CH2-2-CF3—Ph
1580	CF2CF2Cl	H	H	CH2CH2CHPh
1581	CF2CF2Cl	H		morpholin-4-yl
1582	CF2CF2Cl	H		piperidin-1-yl
1583	CF2CF2Cl	H		thiazolidin-3-yl
1584	CF2CF2Cl	H		pyrrolidin-1-yl
1585	CF2CF2Cl	H		2-methylpyrrolidin-1-yl
1586	CF2CF2Cl	H		═CH—N(CH3)2
1587	CF2CF2Cl	H		═C(CH3)N(CH3)2
1588	CF2CF2Cl	H		═CH—N(C2H5)2
1589	CF2CF2Cl	H		═C(CH3)N(C2H5)2
1590	CF2CF2Cl	H		═CH-piperidine
1591	CF2CF2Cl	H		═CH-morpholine
1592	CF2CF2Cl	H		═CH-pyrrolidine
1593	CF2CF2Cl	H	H	indan-1-yl
1594	CF2CF2Cl	H	H	tetrahydrofuran-2-ylmethyl
1595	C3F7	H	H	H
1596	C3F7	H	H	Me
1597	C3F7	H	H	Et
1598	C3F7	H	H	Pr
1599	C3F7	H	H	iPr
1600	C3F7	H	H	cPr

TABLE 1-continued

Compounds of the formula (I)

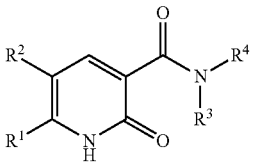


(I)

Ex.	R^1	R^2	R^3	R^4
1601	C3F7	H	H	Bu
1602	C3F7	H	H	cBu
1603	C3F7	H	H	tBu
1604	C3F7	H	Me	Me
1605	C3F7	H	Me	Et
1606	C3F7	H	Me	Bu
1607	C3F7	H	Me	Pr
1608	C3F7	H	Me	iPr
1609	C3F7	H	Et	Et
1610	C3F7	H	Et	Pr
1611	C3F7	H	Et	iPr
1612	C3F7	H	Pr	Pr
1613	C3F7	H	H	cPentyl
1614	C3F7	H	H	cHexyl
1615	C3F7	H	H	CH2(CH2)3CH3
1616	C3F7	H	H	CH2(CH2)4CH3
1617	C3F7	H	H	CH2—cPr
1618	C3F7	H	H	CH2—CN
1619	C3F7	H	H	CH2—C(CH3)3
1620	C3F7	H	H	CH2CF2CF3
1621	C3F7	H	H	CH2CF3
1622	C3F7	H	H	CH2(CF2)2CF3
1623	C3F7	H	H	CH2CH(CH3)CH2CH3
1624	C3F7	H	H	CH2C(CH3)2CH2F
1625	C3F7	H	H	CH2CH(CH3)2
1626	C3F7	H	H	CH2CH(CH2CH3)2
1627	C3F7	H	H	CH2CH2CH(CH3)2
1628	C3F7	H	H	CH2CH2C(CH3)3
1629	C3F7	H	H	CH2CH═CH2
1630	C3F7	H	Me	CH2CH═CH2
1631	C3F7	H	CH2CH═CH2	CH2CH═CH2
1632	C3F7	H	H	CH2CH═CHCH3
1633	C3F7	H	H	CH2—C(CH3)═CH2
1634	C3F7	H	H	CH2—C≡CH
1635	C3F7	H	Me	CH2—C≡CH
1636	C3F7	H	H	CH(CH3)CH2CH3
1637	C3F7	H	H	CH(CH3)cPr
1638	C3F7	H	H	CH(CH3)(CH2)2CH3
1639	C3F7	H	H	CH(CH3)(CH2)4CH3
1640	C3F7	H	H	CH(CH3)(CH2)5CH3
1641	C3F7	H	H	CH(CH2CH3)(CH2)3CH3
1642	C3F7	H	H	CH(CH3)CH2CH(CH3)2
1643	C3F7	H	H	CH(CH3)C(CH3)3
1644	C3F7	H	H	CH(CH3)CH(CH3)2
1645	C3F7	H	H	CH(CH3)CH2CH2CH(CH3)2
1646	C3F7	H	H	CH(CH2CH3)2
1647	C3F7	H	H	C(CH3)2CH2CH3
1648	C3F7	H	H	C(CH3)2CH2C(CH3)3
1649	C3F7	H	H	CH2—CH(OMe)2
1650	C3F7	H	H	CH2—CH(OEt)2
1651	C3F7	H	H	CH2CH2—OH
1652	C3F7	H	H	CH2CH2—OMe
1653	C3F7	H	Me	CH2CH2—OMe
1654	C3F7	H	H	CH2CH2—OEt
1655	C3F7	H	H	CH2CH2—SMe
1656	C3F7	H	H	CH2CH2—CN
1657	C3F7	H	H	CH2CH2—NMe2
1658	C3F7	H	H	CH2CH2-morpholin-4-yl
1659	C3F7	H	H	CH(CH3)CH2—OMe
1660	C3F7	H	H	CH(CH3)CH2—NMe2
1661	C3F7	H	H	CH2CH2CH2—OMe
1662	C3F7	H	H	CH2CH2CH2—SMe
1663	C3F7	H	H	CH2CH2CH2—OEt
1664	C3F7	H	H	CH2CH2CH2—OiPr
1665	C3F7	H	H	CH2CH2CH2—OBu
1666	C3F7	H	H	CH2—COOCH3

TABLE 1-continued

Compounds of the formula (I)

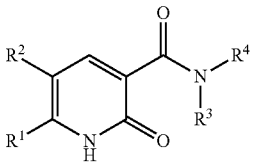


(I)

Ex.	R^1	R^2	R^3	R^4
1667	C3F7	H	Me	CH2—COOCH3
1668	C3F7	H	H	CH(CH3)COOMe
1669	C3F7	H	H	CH(CH3)COOEt
1670	C3F7	H	H	CH2CH2—COOCH3
1671	C3F7	H	H	CH(COOCH3)2
1672	C3F7	H	H	CH(COOEt)CH2—CH(CH3)2
1673	C3F7	H	H	CH(COOMe)CH(CH3)2
1674	C3F7	H	H	O—CH2CH3
1675	C3F7	H	H	O—CH3
1676	C3F7	H	H	O—CH2CH═CH2
1677	C3F7	H	H	O—tBu
1678	C3F7	H	H	O—Pr
1679	C3F7	H	H	O—CH2cPr
1680	C3F7	H	H	O—CH2CH(CH3)2
1681	C3F7	H	H	O—CH2CF3
1682	C3F7	H	H	O—CH(CH3)cPr
1683	C3F7	H	H	O—CH2CH2Cl
1684	C3F7	H	H	O—CH2C≡CH
1685	C3F7	H	H	O—CH2C≡CCH3
1686	C3F7	H	H	O—CH(CH3)C≡CH
1687	C3F7	H	H	CH2—Ph
1688	C3F7	H	Me	CH2—Ph
1689	C3F7	H	H	CH2-pyridin-3-yl
1690	C3F7	H	H	CH2-6-Cl-pyridin-3-yl
1691	C3F7	H	H	CH(CH3)Ph
1692	C3F7	H	H	CH2CH2—Ph
1693	C3F7	H	H	CH2-2-CF3—Ph
1694	C3F7	H	H	CH2CH2CHPh
1695	C3F7	H		morpholin-4-yl
1696	C3F7	H		piperidin-1-yl
1697	C3F7	H		thiazolidin-3-yl
1698	C3F7	H		pyrrolidin-1-yl
1699	C3F7	H		2-methylpyrrolidin-1-yl
1700	C3F7	H		═CH—N(CH3)2
1701	C3F7	H		═C(CH3)N(CH3)2
1702	C3F7	H		═CH—N(C2H5)2
1703	C3F7	H		═C(CH3)N(C2H5)2
1704	C3F7	H		═CH-piperidine
1705	C3F7	H		═CH-morpholine
1706	C3F7	H		═CH-pyrrolidine
1707	C3F7	H	H	indan-1-yl
1708	C3F7	H	H	tetrahydrofuran-2-ylmethyl
1709	CF(CF3)2	H	H	H
1710	C3F7	Cl	H	H
1711	C3F7	Cl	H	Me
1712	C3F7	Cl	H	Et
1713	C3F7	Cl	H	Pr
1714	C3F7	Cl	H	iPr
1715	C3F7	Cl	H	cPr
1716	C3F7	Cl	H	Bu
1717	C3F7	Cl	H	cBu
1718	C3F7	Cl	H	tBu
1719	C3F7	Cl	Me	Me
1720	C3F7	Cl	Et	Et
1721	C3F7	Cl	H	CH2—cPr
1722	C3F7	Cl	H	CH2—C(CH3)3
1723	C3F7	Cl	H	CH2CH(CH3)2
1724	C3F7	Cl	H	CH2CH(CH2CH3)2
1725	C3F7	Cl	H	CH2CH2CH(CH3)2
1726	C3F7	Cl	H	CH2CH2C(CH3)3
1727	C3F7	Cl	H	CH2CH═CH2
1728	C3F7	Cl	H	CH2—C(CH3)═CH2
1729	C3F7	Cl	H	CH2—CCH
1730	C3F7	Cl	Me	CH2—CCH
1731	C3F7	Cl	H	CH(CH3)CH2CH3
1732	C3F7	Cl	H	CH(CH3)cPr

TABLE 1-continued

Compounds of the formula (I)

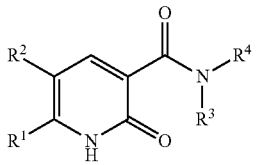


(I)

Ex.	R^1	R^2	R^3	R^4
1733	C3F7	Cl	H	CH(CH3)(CH2)2CH3
1734	C3F7	Cl	H	CH(CH3)(CH2)4CH3
1735	C3F7	Cl	H	CH(CH3)CH2CH(CH3)2
1736	C3F7	Cl	H	CH(CH3)C(CH3)3
1737	C3F7	Cl	H	CH(CH3)CH(CH3)2
1738	C3F7	Cl	H	CH(CH2CH3)2
1739	C3F7	Cl	H	CH2—CH(OMe)2
1740	C3F7	Cl	H	CH2—CH(OEt)2
1741	C3F7	Cl	H	CH2CH2—OH
1742	C3F7	Cl	H	CH2CH2—OMe
1743	C3F7	Cl	Me	CH2CH2—OMe
1744	C3F7	Cl	H	CH(CH3)CH2—OMe
1745	C3F7	Cl	H	CH2CH2CH2—OMe
1746	C3F7	Cl	H	CH2—COOCH3
1747	C3F7	Cl	Me	CH2—COOCH3
1748	C3F7	Cl	H	CH(CH3)COOMe
1749	C3F7	Cl	H	CH(CH3)COOEt
1750	C3F7	Cl	H	CH2CH2—COOCH3
1751	C3F7	Br	H	H
1752	C3F7	Br	H	Me
1753	C3F7	Br	H	Et
1754	C3F7	Br	H	Pr
1755	C3F7	Br	H	iPr
1756	C3F7	Br	H	cPr
1757	C3F7	Br	H	Bu
1758	C3F7	Br	H	cBu
1759	C3F7	Br	H	tBu
1760	C3F7	Br	Me	Me
1761	C3F7	Br	Et	Et
1762	C3F7	Br	H	CH2-cPr
1763	C3F7	Br	H	CH2—C(CH3)3
1764	C3F7	Br	H	CH2CH(CH3)2
1765	C3F7	Br	H	CH2CH(CH2CH3)2
1766	C3F7	Br	H	CH2CH2CH(CH3)2
1767	C3F7	Br	H	CH2CH2C(CH3)3
1768	C3F7	Br	H	CH2CH═CH2
1769	C3F7	Br	H	CH2—C(CH3)═CH2
1770	C3F7	Br	H	CH2—CCH
1771	C3F7	Br	Me	CH2—CCH
1772	C3F7	Br	H	CH(CH3)CH2CH3
1773	C3F7	Br	H	CH(CH3)cPr
1774	C3F7	Br	H	CH(CH3)(CH2)2CH3
1775	C3F7	Br	H	CH(CH3)(CH2)4CH3
1776	C3F7	Br	H	CH(CH3)CH2CH(CH3)2
1777	C3F7	Br	H	CH(CH3)C(CH3)3
1778	C3F7	Br	H	CH(CH3)CH(CH3)2
1779	C3F7	Br	H	CH(CH3)CH2CH2CH(CH3)2
1780	C3F7	Br	H	CH(CH2CH3)2
1781	C3F7	Br	H	CH2—CH(OMe)2
1782	C3F7	Br	H	CH2—CH(OEt)2
1783	C3F7	Br	H	CH2CH2—OH
1784	C3F7	Br	H	CH2CH2—OMe
1785	C3F7	Br	H	CH(CH3)CH2—OMe
1786	C3F7	Br	H	CH2CH2CH2—OMe
1787	C3F7	Br	H	CH2—COOCH3
1788	C3F7	Br	Me	CH2—COOCH3
1789	C3F7	Br	H	CH(CH3)COOMe
1790	C3F7	Br	H	CH(CH3)COOEt
1791	C3F7	Br	H	CH2CH2—COOCH3
1792	C3F7	I	H	H
1793	C3F7	I	H	Me
1794	C3F7	I	H	Et
1795	C3F7	I	H	Pr
1796	C3F7	I	H	iPr
1797	C3F7	I	H	cPr
1798	C3F7	I	H	Bu

TABLE 1-continued

Compounds of the formula (I)

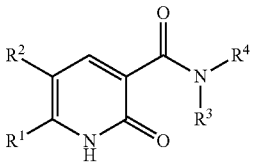


(I)

Ex.	R^1	R^2	R^3	R^4
1799	C3F7	I	H	cBu
1800	C3F7	I	H	tBu
1801	C3F7	I	Me	Me
1802	C3F7	I	Et	Et
1803	C3F7	I	H	CH2—cPr
1804	C3F7	I	H	CH2—C(CH3)3
1805	C3F7	I	H	CH2CH(CH3)2
1806	C3F7	I	H	CH2CH(CH2CH3)2
1807	C3F7	I	H	CH2CH2CH(CH3)2
1808	C3F7	I	H	CH2CH2C(CH3)3
1809	C3F7	I	H	CH2CH═CH2
1810	C3F7	I	H	CH2—C(CH3)═CH2
1811	C3F7	I	H	CH2—CCH
1812	C3F7	I	Me	CH2—CCH
1813	C3F7	I	H	CH(CH3)CH2CH3
1814	C3F7	I	H	CH(CH3)cPr
1815	C3F7	I	H	CH(CH3)(CH2)2CH3
1816	C3F7	I	H	CH(CH3)(CH2)4CH3
1817	C3F7	I	H	CH(CH3)CH2CH(CH3)2
1818	C3F7	I	H	CH(CH3)C(CH3)3
1819	C3F7	I	H	CH(CH3)CH(CH3)2
1820	C3F7	I	H	CH(CH2CH3)2
1821	C3F7	I	H	CH2—CH(OMe)2
1822	C3F7	I	H	CH2—CH(OEt)2
1823	C3F7	I	H	CH2CH2—OH
1824	C3F7	I	H	CH2CH2—OMe
1825	C3F7	I	Me	CH2CH2—OMe
1826	C3F7	I	H	CH(CH3)CH2—OMe
1827	C3F7	I	H	CH2CH2CH2—OMe
1828	C3F7	I	H	CH2—COOCH3
1829	C3F7	I	Me	CH2—COOCH3
1830	C3F7	I	H	CH(CH3)COOMe
1831	C3F7	I	H	CH(CH3)COOEt
1832	C3F7	I	H	CH2CH2—COOCH3
1833	CF3	I	H	Me
1834	CF3	I	H	Et
1835	CF3	I	H	Pr
1836	CF3	I	H	iPr
1837	CF3	I	H	cPr
1838	CF3	I	H	Bu
1839	CF3	I	H	cBu
1840	CF3	I	H	tBu
1841	CF3	I	Me	Me
1842	CF3	I	Et	Et
1843	CF3	I	H	CH2(CH2)3CH3
1844	CF3	I	H	CH2(CH2)4CH3
1845	CF3	I	H	CH2—cPr
1846	CF3	I	H	CH2—C(CH3)3
1847	CF3	I	H	CH2CH(CH3)2
1848	CF3	I	H	CH2CH(CH2CH3)2
1849	CF3	I	H	CH2CH2CH(CH3)2
1850	CF3	I	H	CH2CH2C(CH3)3
1851	CF3	I	H	CH2CH═CH2
1852	CF3	I	H	CH2—C(CH3)═CH2
1853	CF3	I	H	CH2—CCH
1854	CF3	I	H	CH(CH3)CH2CH3
1855	CF3	I	H	CH(CH3)cPr
1856	CF3	I	H	CH(CH3)(CH2)2CH3
1857	CF3	I	H	CH(CH3)(CH2)4CH3
1858	CF3	I	H	CH(CH3)CH2CH(CH3)2
1859	CF3	I	H	CH(CH3)C(CH3)3
1860	CF3	I	H	CH(CH3)CH(CH3)2
1861	CF3	I	H	CH(CH2CH3)2
1862	CF3	I	H	C(CH3)2CH2CH3
1863	CF3	I	H	C(CH3)2CH2C(CH3)3
1864	CF3	I	H	CH2—CH(OMe)2

TABLE 1-continued

Compounds of the formula (I)

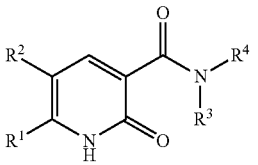


(I)

Ex.	R^1	R^2	R^3	R^4
1865	CF3	I	H	CH2—CH(OEt)2
1866	CF3	I	H	CH2CH2—OH
1867	CF3	I	H	CH2CH2—OMe
1868	CF3	I	Me	CH2CH2—OMe
1869	CF3	I	H	CH(CH3)CH2—OMe
1870	CF3	I	H	CH2CH2CH2—OMe
1871	CF3	I	H	CH2—COOCH3
1872	CF3	I	Me	CH2—COOCH3
1873	CF3	I	H	CH(CH3)COOMe
1874	CF3	I	H	CH(CH3)COOEt
1875	CF3	I	H	CH2CH2—COOCH3
1876	CF2Cl	I	H	H
1877	CF2Cl	I	H	Me
1878	CF2Cl	I	H	Et
1879	CF2Cl	I	H	Pr
1880	CF2Cl	I	H	iPr
1881	CF2Cl	I	H	cPr
1882	CF2Cl	I	H	Bu
1883	CF2Cl	I	H	cBu
1884	CF2Cl	I	H	tBu
1885	CF2Cl	I	Me	Me
1886	CF2Cl	I	H	CH2—cPr
1887	CF2Cl	I	H	CH2—C(CH3)3
1888	CF2Cl	I	H	CH2CH(CH3)2
1889	CF2Cl	I	H	CH2CH(CH2CH3)2
1890	CF2Cl	I	H	CH2CH2CH(CH3)2
1891	CF2Cl	I	H	CH2CH2C(CH3)3
1892	CF2Cl	I	H	CH2CH═CH2
1893	CF2Cl	I	Me	CH2CH═CH2
1894	CF2Cl	I	H	CH2—C(CH3)═CH2
1895	CF2Cl	I	H	CH2—CCH
1896	CF2Cl	I	Me	CH2—CCH
1897	CF2Cl	I	H	CH(CH3)CH2CH3
1898	CF2Cl	I	H	CH(CH3)cPr
1899	CF2Cl	I	H	CH(CH3)(CH2)2CH3
1900	CF2Cl	I	H	CH(CH3)(CH2)4CH3
1901	CF2Cl	I	H	CH(CH3)(CH2)5CH3
1902	CF2Cl	I	H	CH(CH2CH3)(CH2)3CH3
1903	CF2Cl	I	H	CH(CH3)CH2CH(CH3)2
1904	CF2Cl	I	H	CH(CH3)C(CH3)3
1905	CF2Cl	I	H	CH(CH3)CH(CH3)2
1906	CF2Cl	I	H	CH(CH3)CH2CH2CH(CH3)2
1907	CF2Cl	I	H	CH(CH2CH3)2
1908	CF2Cl	I	H	C(CH3)2CH2CH3
1909	CF2Cl	I	H	C(CH3)2CH2C(CH3)3
1910	CF2Cl	I	H	CH2—CH(OMe)2
1911	CF2Cl	I	H	CH2—CH(OEt)2
1912	CF2Cl	I	H	CH2CH2—OH
1913	CF2Cl	I	H	CH2CH2—OMe
1914	CF2Cl	I	Me	CH2CH2—OMe
1915	CF2Cl	I	H	CH2CH2—OEt
1916	CF2Cl	I	H	CH(CH3)CH2—OMe
1917	CF2Cl	I	H	CH2CH2CH2—OMe
1918	CF2Cl	I	H	CH2—COOCH3
1919	CF2Cl	I	Me	CH2—COOCH3
1920	CF2Cl	I	H	CH(CH3)COOMe
1921	CF2Cl	I	H	CH(CH3)COOEt
1922	CF2Cl	I	H	CH2CH2—COOCH3
1923	CF2CF3	I	H	Me
1924	CF2CF3	I	H	Et
1925	CF2CF3	I	H	Pr
1926	CF2CF3	I	H	iPr
1927	CF2CF3	I	H	cPr
1928	CF2CF3	I	H	Bu
1929	CF2CF3	I	H	cBu
1930	CF2CF3	I	H	tBu

TABLE 1-continued

Compounds of the formula (I)

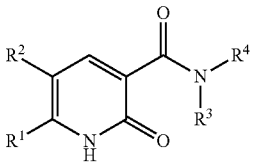


(I)

Ex.	R^1	R^2	R^3	R^4
1931	CF2CF3	I	Me	Me
1932	CF2CF3	I	Et	Et
1933	CF2CF3	I	H	CH2—cPr
1934	CF2CF3	I	H	CH2—C(CH3)3
1935	CF2CF3	I	H	CH2CH(CH3)2
1936	CF2CF3	I	H	CH2CH(CH2CH3)2
1937	CF2CF3	I	H	CH2CH2CH(CH3)2
1938	CF2CF3	I	H	CH2CH2C(CH3)3
1939	CF2CF3	I	H	CH2CH═CH2
1940	CF2CF3	I	Me	CH2CH═CH2
1941	CF2CF3	I	H	CH2—C(CH3)═CH2
1942	CF2CF3	I	H	CH2—CCH
1943	CF2CF3	I	Me	CH2—CCH
1944	CF2CF3	I	H	CH(CH3)CH2CH3
1945	CF2CF3	I	H	CH(CH3)cPr
1946	CF2CF3	I	H	CH(CH3)(CH2)2CH3
1947	CF2CF3	I	H	CH(CH3)(CH2)4CH3
1948	CF2CF3	I	H	CH(CH3)CH2CH(CH3)2
1949	CF2CF3	I	H	CH(CH3)C(CH3)3
1950	CF2CF3	I	H	CH(CH3)CH(CH3)2
1951	CF2CF3	I	H	CH(CH2CH3)2
1952	CF2CF3	I	H	CH2—CH(OMe)2
1953	CF2CF3	I	H	CH2—CH(OEt)2
1954	CF2CF3	I	HH	CH2CH2—OH
1955	CF2CF3	I	H	CH2CH2—OMe
1956	CF2CF3	I	Me	CH2CH2—OMe
1957	CF2CF3	I	H	CH(CH3)CH2—OMe
1958	CF2CF3	I	H	CH2CH2CH2—OMe
1959	CF2CF3	I	H	CH2—COOCH3
1960	CF2CF3	I	Me	CH2—COOCH3
1961	CF2CF3	I	H	CH(CH3)COOMe
1962	CF2CF3	I	H	CH(CH3)COOEt
1963	CF2CF3	I	H	CH2CH2—COOCH3
1964	CF2CF2Cl	Cl	H	H
1965	CF2CF2Cl	Cl	H	Me
1966	CF2CF2Cl	Cl	H	Et
1967	CF2CF2Cl	Cl	H	Pr
1968	CF2CF2Cl	Cl	H	iPr
1969	CF2CF2Cl	Cl	H	cPr
1970	CF2CF2Cl	Cl	H	Bu
1971	CF2CF2Cl	Cl	H	cBu
1972	CF2CF2Cl	Cl	H	tBu
1973	CF2CF2Cl	Cl	Me	Me
1974	CF2CF2Cl	Cl	Et	Et
1975	CF2CF2Cl	Cl	H	CH2—cPr
1976	CF2CF2Cl	Cl	H	CH2—C(CH3)3
1977	CF2CF2Cl	Cl	H	CH2CH(CH3)2
1978	CF2CF2Cl	Cl	H	CH2CH(CH2CH3)2
1979	CF2CF2Cl	Cl	H	CH2CH2CH(CH3)2
1980	CF2CF2Cl	Cl	H	CH2CH2C(CH3)3
1981	CF2CF2Cl	Cl	H	CH2CH═CH2
1982	CF2CF2Cl	Cl	Me	CH2CH═CH2
1983	CF2CF2Cl	Cl	H	CH2—C(CH3)═CH2
1984	CF2CF2Cl	Cl	H	CH2—CCH
1985	CF2CF2Cl	Cl	Me	CH2—CCH
1986	CF2CF2Cl	Cl	H	CH(CH3)CH2CH3
1987	CF2CF2Cl	Cl	H	CH(CH3)cPr
1988	CF2CF2Cl	Cl	H	CH(CH3)(CH2)2CH3
1989	CF2CF2Cl	Cl	H	CH(CH3)(CH2)4CH3
1990	CF2CF2Cl	Cl	H	CH(CH3)CH2CH(CH3)2
1991	CF2CF2Cl	Cl	H	CH(CH3)C(CH3)3
1992	CF2CF2Cl	Cl	H	CH(CH3)CH(CH3)2
1993	CF2CF2Cl	Cl	H	CH(CH2CH3)2
1994	CF2CF2Cl	Cl	H	CH2—CH(OMe)2
1995	CF2CF2Cl	Cl	H	CH2—CH(OEt)2
1996	CF2CF2Cl	Cl	H	CH2CH2—OH

TABLE 1-continued

Compounds of the formula (I)

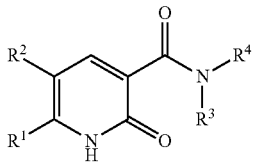


(I)

Ex.	R^1	R^2	R^3	R^4
1997	CF2CF2Cl	Cl	H	CH2CH2—OMe
1998	CF2CF2Cl	Cl	Me	CH2CH2—OMe
1999	CF2CF2Cl	Cl	H	CH(CH3)CH2—OMe
2000	CF2CF2Cl	Cl	H	CH2CH2CH2—OMe
2001	CF2CF2Cl	Cl	H	CH2—COOCH3
2002	CF2CF2Cl	Cl	Me	CH2—COOCH3
2003	CF2CF2Cl	Cl	H	CH(CH3)COOMe
2004	CF2CF2Cl	Cl	H	CH(CH3)COOEt
2005	CF2CF2Cl	Cl	H	CH2CH2—COOCH3
2006	CF2CF2Cl	Br	H	H
2007	CF2CF2Cl	Br	H	Me
2008	CF2CF2Cl	Br	H	Et
2009	CF2CF2Cl	Br	H	Pr
2010	CF2CF2Cl	Br	H	iPr
2011	CF2CF2Cl	Br	H	cPr
2012	CF2CF2Cl	Br	H	Bu
2013	CF2CF2Cl	Br	H	cBu
2014	CF2CF2Cl	Br	H	tBu
2015	CF2CF2Cl	Br	Me	Me
2016	CF2CF2Cl	Br	Et	Et
2017	CF2CF2Cl	Br	H	CH2—cPr
2018	CF2CF2Cl	Br	H	CH2—C(CH3)3
2019	CF2CF2Cl	Br	H	CH2CH(CH3)2
2020	CF2CF2Cl	Br	H	CH2CH(CH2CH3)2
2021	CF2CF2Cl	Br	H	CH2CH2CH(CH3)2
2022	CF2CF2Cl	Br	H	CH2CH2C(CH3)3
2023	CF2CF2Cl	Br	H	CH2CH═CH2
2024	CF2CF2Cl	Br	Me	CH2CH═CH2
2025	CF2CF2Cl	Br	H	CH2—C(CH3)═CH2
2026	CF2CF2Cl	Br	H	CH2—CCH
2027	CF2CF2Cl	Br	Me	CH2—CCH
2028	CF2CF2Cl	Br	H	CH(CH3)CH2CH3
2029	CF2CF2Cl	Br	H	CH(CH3)cPr
2030	CF2CF2Cl	Br	H	CH(CH3)(CH2)2CH3
2031	CF2CF2Cl	Br	H	CH(CH3)(CH2)4CH3
2032	CF2CF2Cl	Br	H	CH(CH3)CH2CH(CH3)2
2033	CF2CF2Cl	Br	H	CH(CH3)C(CH3)3
2034	CF2CF2Cl	Br	H	CH(CH3)CH(CH3)2
2035	CF2CF2Cl	Br	H	CH(CH2CH3)2
2036	CF2CF2Cl	Br	H	CH2—CH(OMe)2
2037	CF2CF2Cl	Br	H	CH2—CH(OEt)2
2038	CF2CF2Cl	Br	H	CH2CH2—OH
2039	CF2CF2Cl	Br	H	CH2CH2—OMe
2040	CF2CF2Cl	Br	Me	CH2CH2—OMe
2041	CF2CF2Cl	Br	H	CH(CH3)CH2—OMe
2042	CF2CF2Cl	Br	H	CH2CH2CH2—OMe
2043	CF2CF2Cl	Br	H	CH2—COOCH3
2044	CF2CF2Cl	Br	Me	CH2—COOCH3
2045	CF2CF2Cl	Br	H	CH(CH3)COOMe
2046	CF2CF2Cl	Br	H	CH(CH3)COOEt
2047	CF2CF2Cl	Br	H	CH2CH2—COOCH3
2048	CF2CF2Cl	I	H	H
2049	CF2CF2Cl	I	H	Me
2050	CF2CF2Cl	I	H	Et
2051	CF2CF2Cl	I	H	Pr
2052	CF2CF2Cl	I	H	iPr
2053	CF2CF2Cl	I	H	cPr
2054	CF2CF2Cl	I	H	Bu
2055	CF2CF2Cl	I	H	cBu
2056	CF2CF2Cl	I	H	tBu
2057	CF2CF2Cl	I	Me	Me
2058	CF2CF2Cl	I	Et	Et
2059	CF2CF2Cl	I	H	CH2—cPr
2060	CF2CF2Cl	I	H	CH2—C(CH3)3
2061	CF2CF2Cl	I	H	CH2CH(CH3)2
2062	CF2CF2Cl	I	H	CH2CH(CH2CH3)2

TABLE 1-continued

Compounds of the formula (I)

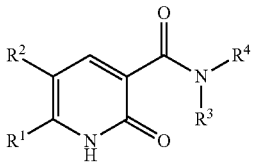


(I)

Ex.	R^1	R^2	R^3	R^4
2063	CF2CF2Cl	I	H	CH2CH2CH(CH3)2
2064	CF2CF2Cl	I	H	CH2CH2C(CH3)3
2065	CF2CF2Cl	I	H	CH2CH═CH2
2066	CF2CF2Cl	I	Me	CH2CH═CH2
2067	CF2CF2Cl	I	H	CH2—C(CH3)═CH2
2068	CF2CF2Cl	I	H	CH2—CCH
2069	CF2CF2Cl	I	Me	CH2—CCH
2070	CF2CF2Cl	I	H	CH(CH3)CH2CH3
2071	CF2CF2Cl	I	H	CH(CH3)cPr
2072	CF2CF2Cl	I	H	CH(CH3)(CH2)2CH3
2073	CF2CF2Cl	I	H	CH(CH3)(CH2)4CH3
2074	CF2CF2Cl	I	H	CH(CH3)CH2CH(CH3)2
2075	CF2CF2Cl	I	H	CH(CH3)C(CH3)3
2077	CF2CF2Cl	I	H	CH(CH3)CH(CH3)2
2078	CF2CF2Cl	I	H	CH(CH2CH3)2
2079	CF2CF2Cl	I	H	CH2—CH(OMe)2
2080	CF2CF2Cl	I	H	CH2—CH(OEt)2
2081	CF2CF2Cl	I	H	CH2CH2—OH
2082	CF2CF2Cl	I	Me	CH2CH2—OMe
2083	CF2CF2Cl	I	H	CH2CH2—OMe
2084	CF2CF2Cl	I	H	CH(CH3)CH2—OMe
2085	CF2CF2Cl	I	H	CH2CH2CH2—OMe
2086	CF2CF2Cl	I	Me	CH2—COOCH3
2087	CF2CF2Cl	I	H	CH2—COOCH3
2088	CF2CF2Cl	I	H	CH(CH3)COOMe
2089	CF2CF2Cl	I	H	CH(CH3)COOEt
2090	CFClCF3	H	H	CH2CH2—COOCH3
2091	CFClCF3	H	H	H
2092	CFClCF3	H	H	Me
2093	CFClCF3	H	H	Et
2094	CFClCF3	H	H	Pr
2095	CFClCF3	H	H	iPr
2096	CFClCF3	H	H	cPr
2097	CFClCF3	H	H	Bu
2098	CFClCF3	H	H	tBu
2099	CFClCF3	H	Me	Me
2100	CFClCF3	H	Et	Et
2101	CFClCF3	H	H	CH2—cPr
2102	CFClCF3	H	H	CH2—C(CH3)3
2103	CFClCF3	H	H	CH2CH(CH3)2
2104	CFClCF3	H	H	CH2CH(CH2CH3)2
2105	CFClCF3	H	H	CH2CH2CH(CH3)2
2106	CFClCF3	H	H	CH2CH2C(CH3)3
2107	CFClCF3	H	H	CH2CH═CH2
2108	CFClCF3	H	Me	CH2CH═CH2
2109	CFClCF3	H	H	CH2—C(CH3)═CH2
2110	CFClCF3	H	H	CH2—CCH
2111	CFClCF3	H	Me	CH2—CCH
2112	CFClCF3	H	H	CH(CH3)CH2CH3
2113	CFClCF3	H	H	CH(CH3)cPr
2114	CFClCF3	H	H	CH(CH3)(CH2)2CH3
2115	CFClCF3	H	H	CH(CH3)(CH2)4CH3
2116	CFClCF3	H	H	CH(CH3)CH2CH(CH3)2
2117	CFClCF3	H	H	CH(CH3)C(CH3)3
2118	CFClCF3	H	H	CH(CH3)CH(CH3)2
2119	CFClCF3	H	H	CH(CH2CH3)2

TABLE 1-continued

Compounds of the formula (I)



(I)

Ex.	R^1	R^2	R^3	R^4
2120	CFClCF3	H	H	CH—CH(OMe)2
2121	CFClCF3	H	H	CH—CH(OEt)2
2122	CFClCF3	H	H	CH2CH2—OH
2123	CFClCF3	H	H	CH2CH2—OMe
2124	CFClCF3	H	Me	CH2CH2—OMe
2125	CFClCF3	H	H	CH(CH3)CH2—OMe
2126	CFClCF3	H	H	CH2CH2CH2—OMe
2127	CFClCF3	H	H	CH2—COOCH3
2128	CFClCF3	H	Me	CH2—COOCH3
2129	CFClCF3	H	H	CH(CH3)COOMe
2130	CFClCF3	H	H	CH(CH3)COOEt
2131	CFClCF3	H	H	CH2CH2—COOCH3
2132	CFClCF3	Br	H	H
2133	CFClCF3	Br	H	Me
2134	CFClCF3	Br	H	Et
2135	CFClCF3	Br	H	Pr
2136	CFClCF3	Br	H	iPr
2137	CFClCF3	Br	H	cPr
2138	CFClCF3	Br	H	Bu
2139	CFClCF3	Br	H	cBu
2140	CFClCF3	Br	H	tBu
2141	CFClCF3	Br	Me	Me
2142	CFClCF3	Br	Et	Et
2143	CFClCF3	Br	H	CH2—cPr
2144	CFClCF3	Br	H	CH2—C(CH3)3
2145	CFClCF3	Br	H	CH2CH(CH3)2
2146	CFClCF3	Br	H	CH2CH(CH2CH3)2
2147	CFClCF3	Br	H	CH2CH2CH(CH3)2
2148	CFClCF3	Br	H	CH2CH2C(CH3)3
2149	CFClCF3	Br	H	CH2CH═CH2
2150	CFClCF3	Br	Me	CH2CH═CH2
2151	CFClCF3	Br	H	CH2—C(CH3)═CH2
2152	CFClCF3	Br	H	CH2—C≡CH
2153	CFClCF3	Br	Me	CH2—C≡CH
2154	CFClCF3	Br	H	CH(CH3)CH2CH3
2155	CFClCF3	Br	H	CH(CH3)cPr
2156	CFClCF3	Br	H	CH(CH3)(CH2)2CH3
2157	CFClCF3	Br	H	CH(CH3)(CH2)4CH3
2158	CFClCF3	Br	H	CH(CH3)CH2CH(CH3)2
2159	CFClCF3	Br	H	CH(CH3)C(CH3)3
2160	CFClCF3	Br	H	CH(CH3)CH(CH3)2
2161	CFClCF3	Br	H	CH(CH2CH3)2
2162	CFClCF3	Br	H	CH2—CH(OMe)2
2163	CFClCF3	Br	H	CH2—CH(OEt)2
2164	CFClCF3	Br	H	CH2CH2—OH
2165	CFClCF3	Br	H	CH2CH2—OMe
2166	CFClCF3	Br	Me	CH2CH2—OMe
2167	CFClCF3	Br	H	CH(CH3)CH2—OMe
2168	CFClCF3	Br	H	CH2CH2CH2—OMe
2169	CFClCF3	Br	H	CH2—COOCH3
2170	CFClCF3	Br	Me	CH2—COOCH3
2171	CFClCF3	Br	H	CH(CH3)COOMe
2172	CFClCF3	Br	H	CH(CH3)COOEt
2173	CFClCF3	Br	H	CH2CH2—COOCH3

TABLE 2

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
1	[CDCl3] 3.03 (d, 3H); 6.88 (d, 1H); 8.65 (d, 1H); 9.22 (br, 1H)
2	[CDCl3] 1.25 (t, 3H); 3.5 (m, 2H); 6.92 (d, 1H); 8.72 (d, 1H), 9.33 (br, 1H), 13.4 (br, 1H)

TABLE 2-continued

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
3	[CDCl3] 1.02 (t, 3H); 1.62 (m, 2H); 3.42 (m, 2H); 6.90 (d, 1H); 8.70 (d, 1H); 9.35 (br, 1H); 13.3 (br, 1H)
4	[CDCl3] 1.25 (d, 6H); 4.22 (m, 1H); 6.90 (d, 1H); 8.68 (d, 1H); 9.22 (d, br, 1H)
5	[CDCl3] 0.61 (m, 2H); 0.89 (m, 2H); 3.00 (m, 1H); 6.90 (d, 1H); 8.68 (d, 1H), 9.31 (br, 1H)
6	[CDCl3] 0.96 (t, 3H); 1.41 (m, 2H); 1.61 (m, 2H); 3.48 (q, 2H); 6.90 (d, 1H); 8.70 (d, 1H); 9.31 (br, 1H); 13.3 (br, 1H)
7	[CDCl3] 1.80 (m, 2H); 2.00 (m, 2H); 2.42 (m, 2H); 4.55 (m, 1H); 6.88 (d, 1H); 8.65 (d, 1H); 9.50 (br, 1H)
8	[CDCl3] 1.44 (s, 9H); 6.90 (d, 1H); 8.62 (d, 1H); 9.32 (br, 1H); 13.4 (br, 1H)
9	[CDCl3] 3.05 (s, 6H); 7.10 (d, 1H); 7.77 (d, 1H)
10	[CDCl3] 1.22 (t, 3H); 3.02 (s, 3H); 3.46 (m, 2H); 7.08 (d, 1H); 7.77 (d, 1H)
11	[CDCl3] 0.90 (t, 3H); 1.30 (br, 2H); 1.60 (m, 2H); 3.03 (s, 3H); 3.42 (br, 2H); 7.10 (d, 1H); 7.74 (d, 1H)
13	[CDCl3] 1.20 (d, 6H); 2.90 (s, 3H); 4.05 (m, br, 1H); 7.03 (d, 1H); 8.68 (d, 1H); 11.2 (br)
14	[CDCl3] 1.20 (t, 6H); 3.40 (m, 4H); 7.05 (d, 1H); 8.70 (d, 1H); 11.1 (br)
16	[CDCl3] 1.21 (m, 9H); 3.39 (q, 2H); 4.0 (br, 1H); 7.04 (d, 1H); 7.68 (d, 1H); 10.6 (br, 1H)
18	[CDCl3] 1.5-1.8 (m, 8H); 4.40 (m, 1H); 6.90 (d, 1H); 8.68 (d, 1H); 9.40 (d, br, 1H); 13.5 (br)
19	[CDCl3] 1.2-1.5 (m, 6H); 1.76 (m, 2H); 2.00 (m, 2H); 4.00 (m, 1H); 6.90 (d, 1H); 8.68 (d, 1H); 9.30 (d, br, 1H); 13.4 (br, 1H)
20	[CDCl3] 0.90 (t, 3H); 1.38 (m, 4H); 1.61 (m, 2H); 3.41 (m, 2H); 6.86 (d, 1H); 8.63 (d, 1H); 9.20 (t, 1H)
22	[CDCl3] 0.30 (m, 2H); 0.60 (m, 2H); 1.05 (m, 1H); 3.30 (m, 2H); 6.90 (d, 1H), 8.70 (d, 1H); 9.38 (br, 1H)
24	[CDCl3] 1.00 (s, 9H); 3.28 (d, 2H); 6.90 (d, 1H); 8,73 (d, 1H); 9.4 (br, 1H); 13.2 (br, 1H)
25	[CDCl3] 4.18 (dt, 2H); 6.92 (d, 1H); 8.72 (d, 1H); 9.8 (t, br, 1H)
26	[CDCl3] 4.11 (m, 2H); 6.90 (d, 1H); 8.70 (d, 1H); 9.80 (br, 1H); 12.16 (br, 1H)
27	[CDCl3] 4.22 (dt; 2H); 6.93 (d, 1H); 8.72 (d, 1H); 9.80 (t, br, 1H)
30	[CDCl3] 1.00 (d, 6H); 1.87 (m, 1H); 3.29 (t, 2H); 6.88 (d, 1H); 8.64 (d, 1H); 9.32 (br, 1H); 12.5 (br, 1H)
32	[CDCl3] 0.95 (d, 6H); 1.48 (m, 2H); 1.70 (m, 1H); 3.48 (m, 2H); 6.88 (d, 1H); 8.65 (d, 1H); 9.22 (br, 1H), 12.6 (br)
34	[CDCl3] 4.10 (t, 2H); 5.22 (dd, 2H); 5.95 (m, 1H); 6.90 (d, 1H); 8.70 (d, 1H); 9.40 (br, 1H); 12.7 (br, 1H)
36	[CDCl3] 4.0 (m, 4H); 5.21 (d, 4H); 5.80 (m, 2H); 7.04 (d, 1H); 7.78 (d, 1H); 11.0 (br)
38	[CDCl3] 1.80 (s, 3H); 4.02 (d, 2H); 4.93 (d, 2H); 6.89 (d 1H); 8.70 (d, 1H); 9.43 (br, 1H); 13.2 (br, 1H)
39	[CDCl3] 2.24 (t, 1H); 4.22 (m, 2H); 6.88 (d, 1H); 8.68 (d, 1H); 9.50 (br, 1H)
40	[CDCl3] 2.30 (s, 1H); 3.12 (s, 3H); 4.22 (br, 2H); 7.04 (d, 1H); 7.84 (d, 1H); 10.9 (br)
41	[CDCl3] 0.95 (t, 3H); 1.22 (d, 3H); 1.58 (m, 2H); 4.10 (m, 1H); 6.88 (d, 1H); 8.66 (d, 1H); 9.20 (br, 1H); 13.0 (br, 1H)
43	[DMSO] 0.93 (t, 3H); 1.16 (d, 3H); 1.30 (m, 2H); 1.48 (m, 2H); 4.00 (m, 1H); 7.35 (br, 1H); 7.39 (d, 1H); 8.40 (d, 1H); 13.40 (br)
44	[DMSO] 0.87 (t, 3H); 1.15 (d, 3H); 1.27 (m, 6H); 1.48 (m, 2H); 4.00 (m, 1H); 7.33 (d, 1H); 8.40 (d, 1H); 8.80 (br, 1H), 13.4 (br, 1H)
47	[CDCl3] 0.93 (d, 6H); 1.22 (d, 3H); 1.35 (m, 1H), 1.50 (m, 1H); 1.65 (m, 1H); 4.23 (m, 1H); 6.90 (d, 1H); 8.64 (d, 1H); 9.20 (d, br, 1H); 13.3 (br, 1H)
48	[CDCl3] 0.96 (s, 9H); 1.18 (d, 3H); 4.10 (m, 1H); 6.90 (d, 1H); 8.74 (d, 1H); 9.37 (d, br, 1H), 13.6 (br, 1H)
49	[CDCl3] 0.95 (dt, 6H); 1.20 (d, 3H); 1.80 (m, 1H); 4.07 (m, 1H); 6.90 (d, 1H); 8.70 (d, 1H); 9.30 (d, br, 1H); 13.6 (br)
51	[DMSO] 0.85 (t, 6H); 1.45 (m, 2H); 1.55 (m, 2H); 3.80 (m, 1H); 7.33 (d, br, 1H); 8.38 (d, 1H); 8.65 (br, 1H); 13.5 (br, 1H)
54	[CDCl3] 3.40 (s, 6H); 3.62 (t, 2H); 4.50 (t, 1H); 6.89 (d, 1H); 8.65 (d, 1H); 9.30 (br, 1H); 12.4 (br, 1H)
55	[CDCl3] 1.21 (t, 6H); 3.60 (m, 4H); 3.72 (m, 2H); 4.61 (t, 1H); 6.88 (d, 1H); 8.61 (d, 1H); 9.28 (br, 1H), 12.0 (br)
56	[DMSO] 3.40 (m, 2H); 3.53 (m, 2H); 7.32 (d, br, 1H); 8.45 (d, 1H); 9.05 (br, 1H); 13.6 (br, 1H)
57	[CDCl3] 3.40 (s, 3H); 3.56 (t, 2H); 3.64 (m, 2H); 6.90 (d, 1H), 8.65 (d, 1H); 9.35 (br, 1H)
64	[CDCl3] 1.25 (d, 3H); 3.40 (s, 3H); 3.43 (d, 2H); 4.37 (m, 1H); 6.89 (d, 1H); 8.64 (d, 1H); 9.30 (d, br, 1H); 13.0 (br, 1H)
66	[CDCl3] 1.90 (m, 2H); 3.34 (s, 3H); 3.46 (t, 2H); 3.55 (q, 2H); 6.90 (d, 1H); 8.60 (d, 1H); 9.23 (br, 1H); 12.5 (br)
71	[CDCl3] 3.80 (s, 3H); 4.22 (d, 2H); 6.88 (d, 1H); 8.64 (d, 1H); 9.62 (t, 1H),
72	[CDCl3] 3.10 (s, 3H); 3.75 (s, 3H); 4.25 (s, 2H); 7.18 (d, 1H); 7.80 (d, 1H)
75	[CDCl3] 2.64 (t, 2H); 3.69 (s, 3H); 3.73 (m, 2H); 6.88 (d, 1H); 8.61 (d, 1H); 9.41 (t, br, 1H); 12.2 (br, 1H)
76	[CDCl3] 3.83 (s, 6H); 5.42 (d, 1H); 6.90 (d, 1H); 8.63 (d, 1H), 10.2 (br, 1H),
77	[CDCl3] 0.99 (t, 6H); 1.25 (t, 3H)1.75 (m, 3H); 4.20 (m, 2H); 4.72 (m, 1H); 6.90 (d, 1H); 8.64 (d, 1H); 9.60 (d, br, 1H)
78	[CDCl3] 1.05 (t, 6H); 2.30 (m, 1H); 3.78 (s, 3H); 4.72 (m, 1H); 6.90 (d, 1H); 8.70 (d, 1H); 9.76 (d, br, 1H), 13.6 (br, 1H)
79	[CDCl3] 1.35 (t, 3H); 4.10 (q, 2H); 6.91 (d, 1H); 8.71 (d, 1H); 11.46 (s, 1H)
80	[CDCl3] 3.41 (s, 3H); 3.68 (s, 3H); 7.18 (d, 1H); 8.32 (d, 1H)
81	[CDCl3] 4.50 (d, 2H); 5.3 (m, 2H); 6.0 (m, 1H); 6.90 (d, 1H); 8.70 (d, 1H); 11.43 (s, 1H)
82	[CDCl3] 1.36 (s, 9H); 6.92 (d, 1H); 8.72 (d, 1H); 11.22 (s, 1H); 13.0 (br, 1H)

TABLE 2-continued

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
92	[CDCl3] 4.62 (d, 2H), 6.84 (d, 1H); 7.3 (m, 5H); 8.70 (d, 1H); 9.65 (br, 1H), 13.0 (br, 1H)
93	[CDCl3] 2.95 (s, 3H); 4.65 (br, 2H); 7.05 (d, 1H); 7.3 (m, 5H), 7.82 (d, 1H); 11.7 (br)
94	[DMSO] 4.55 (d, 2H); 7.33 (d, 1H); 7.37 (dd, 1H); 7.75 (dt, 1H); 8.40 (d, 1H); 8.48 (dd, 1H); 8.58 (s, 1H); 9.45 (br, 1H); 13.4 (br, 1H)
95	[DMSO] 4.55 (d, 2H); 7.30 (d, br, 1H); 7.50 (d, 1H); 7.80 (dd, 1H); 8.37 (m, 2H); 9.55 (br, 1H); 13.4 (br, 1H)
96	[CDCl3] 1.59 (d, 3H); 5.25 (m, 1H); 6.88 (d, 1H); 7.2-7.4 (m, 5H); 8.68 (d, 1H); 9.75 (d, br, 1H); 13.5 (br, 1H)
97	[CDCl3] 2.94 (t, 2H); 3.70 (m, 2H); 6.85 (d, 1H); 7.2-7.4 (m, 5H); 8.62 (d, 1H); 9.24 (br, 1H)
98	[CDCl3] 4.81 (d, 2H); 6.85 (d, 1H); 7.40 (t, 1H); 7.52 (t, 1H); 7.61 (d, 1H); 7.67 (d, 1H); 8.68 (d, 1H); 9.68 (t, br, 1H)
99	[DMSO] 2.28 (q, 2H); 3.20 (q, 2H); 4.03 (t, 1H); 7.1-7.4 (m, 11H); 8.35 (d, 1H); 9.0 (br), 13.4 (br, 1H)
100	[CDCl3] 3.45-3.55 (br, 4H); 3.75 (m, 4H); 7.03 (d, 1H); 7.80 (d, 1H); 11.3 (br, 1H)
101	[CDCl3] 1.65 (m, 6H); 3.52 (m, 4H); 7.10 (d, 1H); 7.72 (d, 1H)
102	[CDCl3] 3.06 (t, 2H); 3.90 (m, 2H); 4.65 (m, 2H); 7.08 (d, 1H); 7.90 (d, 1H); 11.0 (br)
103	[CDCl3] 2.00 (m, 4H); 3.67 (m, 4H); 7.20 (d, 1H); 7.97 (d, 1H), 11.7 (br, 1H)
104	[CDCl3] 1.30 (m, 3H); 1.65 (m, 1H); 1.85 (m, 1H); 2.00 (m, 1H); 2.19 (m, 1H); 3.62 (m, 2H); 4.30 (m, 1H); 7.10 (d, 1H); 7.89 (d, 1H)
105	[CDCl3] 3.25 (s, 3H); 3.35 (3.3H); 7.25 (d, 1H); 8.58 (d, 1H); 8.76 (s, 1H)
112	[CDCl3] 1.95 (m, 1H); 2.65 (m, 1H); 2.90 (m, 1H); 3.05 (m, 1H); 5.60 (m, 1H); 6.85 (d, 1H); 7.2-7.4 (m, 4H); 8.68 (d, 1H); 9.52 (d, br, 1H)
113	[CDCl3] 1.60 (m, 1H), 1.90 (m, 2H), 2.01 (m, 1H); 3.42 (m, 1H), 3.65-3.82 (m, 2H), 3.90 (m, 1H), 4.09 (m, 1H); 6.88 (d, 1H); 8.63 (d, 1H); 9.37 (br, 1H)
114	[DMSO] 7.35 (d, 1H); 8.10 (br, 1H); 8.40 (d, 1H); 8.41 (br, 1H); 13.6 (br, 1H)
115	[CDCl3] 3.01 (d, 3H); 6.81 (d, 1H); 8.63 (d, 1H); 9.22 (br, 1H); 11.7 (br, 1H)
116	[CDCl3] 1.25 (t, 3H); 3.5 (m, 2H); 6.85 (d, 1H); 8.66 (d, 1H), 9.33 (br, 1H), 13.0 (br, 1H)
117	[CDCl3] 1.01 (t, 3H); 1.62 (m, 2H); 3.42 (m, 2H); 6.86 (d, 1H); 8.66 (d, 1H); 9.35 (br, 1H); 12.6 (br, 1H)
118	[CDCl3] 1.27 (d, 6H); 4.25 (m, 1H); 6.85 (d, 1H); 8.64 (d, 1H); 9.27 (br, 1H); 13.1 (br, 1H)
119	[CDCl3] 0.62 (m, 2H); 0.85 (m, 2H); 3.02 (m, 1H); 6.84 (d, 1H); 8.78 (d, 1H), 9.33 (br, 1H)
120	[CDCl3] 0.98 (t, 3H); 1.41 (m, 2H); 1.61 (m, 2H); 3.45 (q, 2H); 6.83 (d, 1H); 8.65 (d, 1H); 9.33 (br, 1H); 12.9 (br, 1H)
121	[CDCl3] 1.80 (m, 2H); 2.05 (m, 2H); 2.44 (m, 2H); 4.58 (m, 1H); 6.84 (d, 1H); 8.63 (d, 1H); 9.60 (br, 1H); 13.1 (br)
122	[CDCl3] 1.46 (s, 9H); 6.86 (d, 1H); 8.62 (d, 1H); 9.34 (br, 1H); 13.4 (br, 1H)
123	[CDCl3] 3.08 (s, 6H); 7.06 (d, 1H); 7.79 (d, 1H)
124	[CDCl3] 1.23 (t, 3H); 3.04 (s, 3H); 3.46 (m, 2H); 7.02 (d, 1H); 7.72 (d, 1H)
125	[CDCl3] 0.92 (t, 3H); 1.30 (br, 2H); 1.60 (m, 2H); 3.04 (s, 3H); 3.41 (br, 2H); 7.04 (d, 1H); 7.71 (d, 1H)
127	[CDCl3] 1.20 (d, 6H); 2.90 (s, 3H); 4.05 (m, br, 1H); 7.00 (d, 1H); 7.68 (d, 1H)
128	[CDCl3] 1.20 (t, 6H); 3.41 (m, 4H); 6.98 (d, 1H); 7.66 d, 1H); 11.0 (br)
130	[CDCl3] 1.20 (m, 9H); 3.40 (q, 2H); 4.06 (m, br, 1H); 6.98 (d, 1H); 8.64 (d, 1H); 10.2 (br)
132	[CDCl3] 1.5-1.8 (m, 8H); 4.40 (m, 1H); 6.85 (d, 1H); 8.65 (d, 1H); 9.40 (d, br, 1H); 13.1 (br, 1H)
133	[CDCl3] 1.2-1.7 (m, 6H); 1.80 (m, 2H); 2.00 (m, 2H); 3.98 (m, 1H); 6.85 (d, 1H); 8.64 (d, 1H); 9.30 (d, br, 1H); 13.0 (br)
134	[CDCl3] 0.90 (t, 3H); 1.40 (m, 4H); 1.62 (m, 2H); 3.44 (m, 2H); 6.84 (d, 1H); 8.64 (d, 1H); 9.30 (br, 1H)
136	[CDCl3] 0.30 (m, 2H); 0.59 (m, 2H); 1.05 (m, 1H); 3.32 (m, 2H); 6.86 (d, 1H), 8.65 (d, 1H); 9.40 (br)
138	[CDCl3] 1.00 (s, 9H); 3.26 (d, 2H); 6.86 (d, 1H); 8.70 (d, 1H); 9.42 (br, 1H); 12.5 (br, 1H)
139	[DMSO] 4.25 (dt, 2H); 7.25 (d, 1H); 8.40 (d, 1H); 9.35 (br, 1H); 13.5 (br, 1H)
140	[CDCl3] 4.15 (m, 2H); 6.88 (d, 1H); 8.70 (d, 1H); 9.80 (br, 1H)
141	[CDCl3] 4.20 (dt; 2H); 6.90 (d, 1H); 8.70 (d, 1H); 9.83 (t, br, 1H); 12.80 (br)
144	[CDCl3] 1.00 (d, 6H); 1.90 (m, 1H); 3.30 (t, 2H); 6.83 (d, 1H); 8.65 (d, 1H); 9.35 (br, 1H); 12.2 (br)
146	[CDCl3] 0.96 (d, 6H); 1.50 (m, 2H); 1.70 (m, 1H); 3.48 (m, 2H); 6.83 (d, 1H); 8.67 (d, 1H); 9.30 (br, 1H), 12.9 (br, 1H)
148	[CDCl3] 4.62 (d, 2H); 5.36 (dd, 2H); 5.95 (m, 1H); 7.80 (d, 1H); 8.65 (d, 1H)
150	[CDCl3] 4.0 (m, 4H); 5.22 (d, 4H); 5.80 (m, 2H); 6.93 (d, 1H); 7.72 (d, 1H)
152	[CDCl3] 1.80 (s, 3H); 4.02 (d, 2H); 4.90 (d, 2H); 6.85 (d 1H); 8.68 (d, 1H); 9.48 (br, 1H); 12.8 (br, 1H)
153	[CDCl3] 2.26 (t, 1H); 4.23 (m, 2H); 6.84 (d, 1H); 8.64 (d, 1H); 9.58 (br, 1H); 12.4 (br)
154	[CDCl3] 2.30 (s, 1H); 3.12 (s, 3H); 4.24 (br, 2H); 7.01 (d, 1H); 7.82 (d, 1H); 10.9 (br)
155	[CDCl3] 0.98 (t, 3H); 1.22 (d, 3H); 1.59 (m, 2H); 4.10 (m, 1H); 6.85 (d, 1H); 8.65 (d, 1H); 9.26 (d, br, 1H); 13.4 (br, 1H)
157	[CDCl3] 0.92 (t, 3H); 1.22 (d, 3H); 1.40 (m, 2H); 1.55 (m, 2H); 4.20 (m, 1H); 6.85 (d, 1H); 8.68 (d, 1H); 9.30 (d, br, 1H)
158	[CDCl3] 0.87 (t, 3H); 1.12 (d, 3H); 1.30 (m, 4H); 1.58 (m, 4H); 4.15 (m, 1H); 6.84 (d, 1H); 8.65 (d, 1H); 9.24 (br, 1H), 13.1 (br)
161	[CDCl3] 0.90 (d, 6H); 1.22 (d, 3H), 1.30 (m, 1H); 1.55 (m, 2H); 4.23 (m, 1H); 6.86 (d, 1H); 8.64 (d, 1H); 9.20 (d, br, 1H); 13.0 (br, 1H)
162	[CDCl3] 0.98 (s, 9H); 1.20 (d, 3H); 4.10 (m, 1H); 6.87 (d, 1H); 8.70 (d, 1H); 9.38 (d, br, 1H), 13.2 (br, 1H)

TABLE 2-continued

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
163	[CDCl3] 0.95 (dt, 6H); 1.20 (d, 3H); 1.82 (m, 1H); 4.05 (m, 1H); 6.84 (d, 1H); 8.68 (d, 1H); 9.30 (d, br, 1H); 13.1 (br)
165	[CDCl3] 0.96 (t, 6H); 1.50 (m, 2H); 1.65 (m, 2H); 4.00 (m, 1H); 6.85 (d, 1H); 8.68 (d, 1H); 9.22 (d, br, 1H); 13.5 (br, 1H)
166	[CDCl3] 0.90 (t, 3H); 1.41 (s; 6H); 1.85 (q, 2H); 6.82 (d, 1H); 8.61 (d, 1H); 9.20 (br, 1H); 13.1 (br)
168	[CDCl3] 3.40 (s, 6H); 3.63 (t, 2H); 4.50 (t, 1H); 6.85 (d, 1H); 8.65 (d, 1H); 9.40 (br, 1H); 12.4 (br, 1H)
169	[CDCl3] 1.21 (t, 6H); 3.60 (m, 4H); 3.74 (m, 1H); 4.62 (t, 1H); 6.84 (d, 1H); 8.60 (d, 1H); 9.35 (br, 1H), 11.5 (br)
171	[CDCl3] 3.40 (s, 3H); 3.58 (m, 2H); 3.67 (m, 2H); 6.84 (d, 1H), 8.62 (d, 1H); 9.40 (br, 1H)
178	[CDCl3] 1.24 (d, 3H); 3.40 (s, 3H); 3.42 (d, 2H); 4.40 (m, 1H); 6.86 (d, 1H); 8.64 (d, 1H); 9.35 (br, 1H); 13.0 (br)
180	[DMSO] 1.75 (m, 2H); 3.22 (s, 3H); 3.36 (m, 4H); 7.3 (br, 1H); 8.4 (d, 1H); 9.0 (br); 13.4 (br, 1H)
185	[DMSO] 3.65 (s, 3H); 4.12 (d, 2H); 7.28 (d, br, 1H); 8.42 (d, 1H); 9.25 (t, br, 1H), 13.6 (br, 1H)
189	[CDCl3] 2.66 (t, 2H); 3.70 (s, 3H); 3.76 (m, 2H); 6.83 (d, 1H); 8.61 (d, 1H); 9.51 (t, br, 1H); 12.4 (br, 1H)
193	[CDCl3] 1.37 (t, 3H); 4.08 (q, 2H); 6.88 (d, 1H); 8.69 (d, 1H); 11.48 (s, 1H)
194	[CDCl3] 3.88 (s, 3H); 6.88 (d, 1H); 8.65 (d, 1H); 11.5 (s, 1H)
195	[CDCl3] 4.50 (d, 2H); 5.34 (m, 2H); 6.05 (m, 1H); 6.88 (d, 1H); 8.70 (d, 1H); 11.44 (s, 1H)
196	[CDCl3] 1.39 (s, 9H); 6.88 (d, 1H); 8.70 (d, 1H); 11.22 (s, 1H)
206	[CDCl3] 4.62 (d, 2H), 6.82 (d, 1H); 7.2-7.3 (m, 5H); 8.68 (d, 1H); 9.65 (t, br, 1H), 12.8 (br, 1H)
207	[CDCl3] 2.99 (s, 3H); 4.67 (br, 2H); 7.00 (d, 1H); 7.3-7.4 (m, 5H), 7.78 (d, 1H); 10.2 (br)
210	[CDCl3] 1.60 (d, 3H); 5.30 (m, 1H); 6.85 (d, 1H); 7.2-7.4 (m, 5H); 8.65 (d, 1H); 9.78 (d, br, 1H); 13.2 (br, 1H)
211	[CDCl3] 2.95 (t, 2H); 3.70 (m, 2H); 6.82 (d, 1H); 7.2-7.35 (m, 5H); 8.63 (d, 1H); 9.40 (t, br, 1H); 12.2 (br, 1H)
214	[CDCl3] 3.45-3.55 (br, 4H); 3.75 (m, 4H); 6.96 (d, 1H); 7.78 (d, 1H)
215	[CDCl3] 1.65 (m, 6H); 3.53 (m, 4H); 7.00 (d, 1H); 7.70 (d, 1H)
216	[CDCl3] 3.05 (t, 2H); 3.92 (m, 2H); 4.66 (m, 2H); 7.04 (d, 1H); 7.86 (d, 1H); 10.4 (br)
217	[CDCl3] 2.00 (m, 4H); 3.70 (m, 4H); 7.16 (d, 1H); 7.97 (d, 1H), 11.7 (br, 1H)
218	[CDCl3] 1.30 (m, 3H); 1.65 (m, 1H); 1.85 (m, 1H); 2.04 (m, 1H); 2.20 (m, 1H); 3.63 (m, 2H); 4.33 (m, 1H); 7.12 (d, 1H); 7.89 (d, 1H), 11.5 (br, 1H)
227	[CDCl3] 1.60 (m, 1H), 1.90 (m, 2H), 2.00 (m, 1H); 3.42 (m, 1H), 3.65-3.82 (m, 2H), 3.90 (m, 1H), 4.10 (m, 1H); 6.88 (d, 1H); 8.65 (d, 1H); 9.5 (br, 1H)
228	[DMSO] 6.80 (br, 1H); 6.90 (t, 1H); 7.72 (br, 1H); 8.40 (d, 1H); 8.90 (br, 1H); 13.20 (br, 1H)
229	[DMSO] 2.82 (d, 3H); 6.75 (d, br, 1H); 6.90 (t, 1H); 8.89 (d, 1H); 9.50 (br, 1H); 13.2 (br, 1H)
230	[DMSO] 1.11 (t, 3H); 3.32 (m, 2H); 6.75 (d, br, 1H); 6.90 (t, 1H); 8.39 (d, 1H), 9.60 (br, 1H), 13.2 (br, 1H)
232	[CDCl3] 1.25 (d, 6H); 4.22 (m, 1H); 6.55 (t, 1H); 6.69 (d, 1H); 8.64 (d, 1H); 9.42 (d, br, 1H); 13.0 (br, 1H)
233	[DMSO] 0.51 (m, 2H); 0.74 (m, 2H); 2.84 (m, 1H); 6.79 (d, br, 1H); 6.90 (t, 1H); 8.37 (d, 1H); 9.65 (br, 1H); 13.1 (br, 1H)
250	[DMSO] 0.23 (m, 2H); 0.46 (m, 2H); 1.02 (m, 1H); 3.20 (m, 2H); 6.75 (br, 1H), 6.92 (t, 1H); 8.40 (d, 1H); 9.70 (br, 1H); 13.1 (br, 1H)
252	[DMSO] 0.91 (s, 9H); 3.15 (d, 2H); 6.80 (br, 1H); 6.91 (t, 1H); 8.40 (d, 1H); 9.85 (br, 1H); 13.2 (br, 1H)
258	[DMSO] 0.90 (d, 6H); 1.80 (m, 1H); 3.15 (t, 2H); 6.80 (br, 1H); 6.91 (t, 1H); 8.40 (d, 1H); 9.73 (br, 1H); 13.1 (br, 1H)
262	[DMSO] 3.96 (m, 2H); 5.15 (dd, 2H); 5.94 (m, 1H); 6.80 (br, 1H); 6.92 (t, 1H); 8.40 (d, 1H); 9.75 (br, 1H); 13.2 (br, 1H)
271	[CDCl3] 0.92 (t, 3H); 1.25 (d, 3H); 1.42 (m, 2H); 1.55 (m, 2H); 4.19 (m, 1H); 6.60 (t, 1H); 6.73 (d, 1H); 8.66 (d, 1H); 9.50 (d, br, 1H)
272	[CDCl3] 0.90 (t, 3H); 1.2-1.4 (m, 9H); 1.58 (m, 2H); 4.17 (m, 1H); 6.60 (t, 1H); 6.75 (d, 1H); 8.68 (d, 1H); 9.48 (d, br, 1H)
279	[CDCl3] 0.85 (t, 6H); 1.45 (m, 2H); 1.55 (m, 2H); 3.80 (m, 1H); 6.80 (br, 1H); 6.91 (t, 1H); 8.40 (d, 1H); 9.51 (br, 1H); 13.1 (br, 1H)
280	[DMSO] 0.86 (t, 3H); 1.12 (d, 3H); 1.50 (m, 2H); 3.90 (m, 1H); 6.75 (br, 1H); 6.91 (t, 1H); 8.39 (d, 1H); 9.57 (br, 1H); 13.1 (br, 1H)
285	[DMSO] 3.29 (s, 3H); 3.46 (m, 4H); 6.76 (br, 1H), 6.91 (t, 1H); 8.50 (d, 1H); 9.73 (br, 1H), 13.1 (br, 1H)
291	[DMSO] 1.14 (d, 3H); 3.27 (s, 3H); 3.35 (m, 2H); 4.15 (m, 1H); 6.80 (br, 1H); 6.91 (t, 1H); 8.40 (d, 1H); 9.70 (br, 1H); 13.1 (br, 1H))
293	[DMSO] 1.72 (m, 2H); 3.22 (s, 3H); 3.37 (m, 4H); 6.75 (br, 1H); 6.90 (t, 1H); 8.40 (d, 1H); 9.70 (br, 1H)); 13.2 (br, 1H)
341	[DMSO] 7.45 (d, 1H); 8.15 (br, 1H); 8.45 (br, 1H); 8.50 (d, 1H); 13.7 (br, 1H)
342	[CDCl3] 3.01 (d, 3H); 6.90 (d, 1H); 8.72 (d, 1H); 9.34 (br, 1H)
343	[DMSO] 1.11 (t, 3H); 3.31 (m, 2H); 7.41 (d, 1H); 8.42 (d, 1H); 8.85 (br, 1H), 13.4 (br, 1H)
344	[CDCl3] 1.02 (t, 3H); 1.61 (m, 2H); 3.42 (q, 2H); 6.88 (d, 1H); 8.72 (d, 1H); 9.38 (br, 1H)
345	[CDCl3] 1.25 (d, 6H); 4.25 (m, 1H); 6.90 (d, 1H); 8.72 (d, 1H); 9.30 (d, br, 1H); 13.8 (br, 1H)
346	[CDCl3] 0.60 (m, 2H); 0.88 (m, 2H); 3.02 (m, 1H); 6.90 (d, 1H); 8.72 (d, 1H); 9.42 (br, 1H); 13.4 (br)

TABLE 2-continued

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
347	[DMSO] 0.88 (t, 3H); 1.34 (m, 2H); 1.50 (m, 2H); 3.31 (q, 2H); 7.27 (d, 1H); 8.35 (d, 1H); 9.21 (br, 1H); 12.4 (br, 1H)
348	[DMSO] 1.70 (m, 2H); 2.02 (m, 2H); 2.27 (m, 2H); 4.40 (m, 1H); 7.41 (d, 1H); 8.48 (d, 1H); 9.00 (br, 1H); 13.4 (br, 1H)
349	[DMSO] 1.36 (s, 9H); 7.35 (d, br, 1H); 8.40 (d, 1H); 8.60 (br, 1H); 13.3 (br, 1H)
350	[CDCl3] 3.08 (s, 6H); 7.08 (d, 1H); 7.81 (d, 1H)
355	[CDCl3] 1.21 (t, 6H); 3.42 (m, 4H); 7.04 (d, 1H); 7.71 (d, 1H); 10.8 (br)
363	[DMSO] 0.27 (m, 2H); 0.46 (m, 2H); 1.05 (m, 1H); 3.15 (m, 2H); 7.45 (d, br, 1H); 8.45 (d, 1H); 8.95 (br, 1H); 13.4 (br, 1H)
365	[DMSO] 0.91 (s, 9H); 3.15 (d, 2H); 7.38 (d, br, 1H); 8.40 (d, 1H); 8.83 (br, 1H); 13.4 (br, 1H)
373	[DMSO] 0.90 (d, 6H); 1.42 (m, 2H); 1.63 (m, 1H); 3.33 (m, 2H); 7.40 (d, br, 1H); 8.40 (d, 1H); 8.83 (br, 1H), 13.4 (br, 1H)
375	[DMSO] 3.95 (m, 2H); 5.15 (dd, 2H); 5.90 (m, 1H); 7.40 (d, 1H); 8.41 (d, 1H); 8.98 (br, 1H); 13.4 (br, 1H)
379	[DMSO] 1.73 (s, 3H); 3.88 (m, 2H); 4.75 (d, 2H); 7.40 (d, br, 1H); 8.41 (d, 1H); 8.97 (br, 1H); 13.4 (br, 1H)
380	[DMSO] 3.15 (t, 1H); 4.21 (m, 2H); 7.40 (d, 1H); 8.40 (d, 1H); 9.12 (br, 1H); 13.3 (br, 1H)
382	[CDCl3] 0.97 (t, 3H); 1.22 (d, 3H); 1.59 (m, 2H); 4.10 (m, 1H); 6.88 (d, 1H); 8.72 (d, 1H); 9.24 (d, br, 1H); 13.6 (br)
384	[CDCl3] 0.92 (t, 3H); 1.21 (d, 3H); 1.40 (m, 2H); 1.50 (m, 2H); 4.20 (m, 1H); 6.88 (d, 1H); 8.72 (d, 1H); 9.28 (d, br, 1H)
385	[DMSO] 0.85 (t, 3H); 1.1-1.35 (m, 9H); 1.50 (m, 2H); 4.00 (m, 1H); 7.41 (d, 1H); 8.40 (d, 1H); 8.65 (br, 1H); 13.4 (br, 1H)
388	[DMSO] 0.88 (d, 6H); 1.15 (d, 3H), 1.28 (m, 1H); 1.48 (m, 1H); 1.62 (m, 1H); 4.11 (m, 1H); 7.40 (d, br, 1H); 8.40 (d, 1H); 8.52 (d, br, 1H); 13.4 (br, 1H)
389	[DMSO] 0.90 (s, 9H); 1.10 (d, 3H); 3.90 (m, 1H); 7.38 (d, br, 1H); 8.40 (d, 1H); 8.70 (br, 1H), 13.4 (br, 1H)
390	[DMSO] 0.79 (dt, 6H); 1.10 (d, 3H); 1.75 (m, 1H); 3.87 (m, 1H); 7.40 (d, br, 1H); 8.41 (d, 1H); 8.65 (d, br, 1H); 13.4 (br, 1H)
392	[CDCl3] 0.95 (t, 6H); 1.50 (m, 2H); 1.65 (m, 2H); 4.00 (m, 1H); 6.90 (d, 1H); 8.75 (d, 1H); 9.20 (d, br, 1H); 13.7 (br, 1H)
395	[DMSO] 3.30 (s, 6H); 3.42 (t, 2H); 4.50 (t, 1H); 7.40 (d, br, 1H); 8.45 (d, 1H); 8.90 (br, 1H); 13.4 (br, 1H)
397	[DMSO] 3.38 (m, 2H); 3.52 (m, 2H); 4.80 (t, 1H); 7.40 (d, br, 1H); 8.43 (d, 1H); 8.95 (br, 1H); 13.4 (br, 1H)
398	[CDCl3] 3.38 (s, 3H); 3.58 (m, 2H); 3.65 (m, 2H); 6.88 (d, 1H), 8.70 (d, 1H); 9.43 (br, 1H)
405	[CDCl3] 1.25 (d, 3H); 3.38 (s, 3H); 3.42 (d, 2H); 4.40 (m, 1H); 6.88 (d, 1H); 8.70 (d, 1H); 9.38 (d, br, 1H)
407	[CDCl3] 1.89 (m, 2H); 3.32 (s, 3H); 3.48 (t, 2H); 3.58 (m, 2H); 6.92 (d, 1H); 8.64 (d, 1H); 9.30 (br, 1H)
455	[DMSO] 8.25 (br, 1H); 8.35 (br, 1H); 8.50 (s, 1H); 13.8 (br, 1H)
456	[DMSO] 2.84 (d, 3H); 8.40 (s, 1H); 8.72 (d, br, 1H)
457	[DMSO] 1.12 (t, 3H); 3.35 (q, 2H); 8.40 (s, 1H); 8.75 (t, br, 1H); 13.5 (br, 1H)
458	[DMSO] 0.89 (t, 3H); 1.52 (m, 2H); 3.25 (m, 2H); 8.41 (s, 1H); 8.73 (t, br, 1H); 13.4 (br, 1H)
459	[DMSO] 1.19 (d, 6H); 4.08 (m, 1H); 8.43 (s, 1H); 8.59 (d, br, 1H); 13.4 (br, 1H)
460	[DMSO] 0.59 (m, 2H); 0.75 (m, 2H); 2.87 (m, 1H); 8.39 (s, 1H); 8.73 (d, br, 1H)
461	[DMSO] 0.90 (t, 3H); 1.32 (m, 2H); 1.50 (m, 2H); 3.30 (m, 2H); 8.41 (s, 1H); 8.74 (t, br, 1H); 13.5 (br, 1H)
462	[DMSO] 1.70 (m, 2H); 2.03 (m, 2H); 2.25 (m, 2H); 4.40 (m, 1H); 8.41 (s, 1H); 8.90 (d, br, 1H); 13.5 (br, 1H)
477	[DMSO] 0.25 (m, 2H); 0.47 (m, 2H); 1.02 (m, 1H); 3.19 (t, 2H); 8.45 (s, 1H); 8.80 (t, br, 1H)
479	[DMSO] 0.90 (s, 9H); 3.14 (d, 2H); 8.38 (s, 1H); 8.60 (t, br, 1H); 13.7 (br, 1H)
485	[DMSO] 0.89 (d, 6H); 1.82 (m, 1H); 3.13 (t, 2H); 8.40 (s, 1H); 8.72 (t, br, 1H)
487	[DMSO] 0.90 (d, 6H); 1.41 (q, 2H); 1.62 (m, 1H); 3.32 (m, 2H); 8.40 (s, 1H); 8.72 (t, br, 1H); 13.5 (br, 1H)
489	[CDCl3] 4.10 (d, 2H); 5.25 (dd, 2H); 5.93 (m, 1H); 8.60 (s, 1H); 9.10 (br, 1H); 12.4 (br, 1H)
493	[DMSO] 1.71 (s, 3H); 3.86 (d, 2H); 4.84 (d, 2H); 8.40 (s, 1H); 8.85 (t, br, 1H); 13.5 (br)
494	[DMSO] 3.17 (m, 1H); 4.11 (m, 2H); 8.39 (s, 1H); 8.98 (t, br, 1H), 13.4 (br)
496	[CDCl3] 0.95 (t, 3H); 1.25 (d, 3H); 1.60 (m, 2H); 4.12 (m, 1H); 8.48 (s, 1H); 8.52 (br, 1H)
498	[CDCl3] 0.95 (t, 3H); 1.25 (d, 3H); 1.40 (m, 2H); 1.55 (m, 2H); 4.17 (m, 1H); 8.53 (s, 1H); 8.70 (br, 1H)
499	[CDCl3] 0.87 (t, 3H); 1.21 (d, 3H); 1.32 (m, 6H); 1.53 (m, 2H); 4.15 (m, 1H); 8.62 (s, 1H); 8.99 (d, br, 1H); 13.0 (br)
502	[CDCl3] 0.91 (d, 6H); 1.23 (d, 3H); 1.35 (m, 1H); 1.48 (m, 1H); 1.66 (m, 1H); 4.25 (m, 1H); 8.62 (s, 1H); 8.96 (d, br, 1H); 12.9 (br, 1H)
504	[CDCl3] 0.95 (m, 6H); 1.18 (d, 3H); 1.81 (m, 1H); 4.07 (m, 1H); 8.61 (s, 1H); 8.97 (d, br, 1H); 12.9 (br, 1H)
506	[CDCl3] 0.94 (t, 6H); 1.50 (m, 2H); 1.65 (m, 2H), 4.00 (m, 1H); 8.56 (s, 1H); 8.73 (d, br, 1H)
512	[DMSO] 3.28 (s, 3H); 3.48 (m, 4H); 8.42 (s, 1H); 8.78 (br, 1H); 13.7 (br, 1H)
519	[DMSO] 1.16 (d, 3H); 3.30 (s, 3H); 3.42 (m, 2H); 4.18 (m, 1H); 8.42 (s, 1H); 8.60 (d, br, 1H); 13.7 (br, 1H)
521	[DMSO] 1.74 (m, 2H); 3.26 (s, 3H); 3.39 (m, 4H); 8.40 (s, 1H); 8.80 (t, br, 1H); 13.6 (br, 1H)
569	[DMSO] 8.25 (br, 1H); 8.35 (br, 1H); 8.50 (s, 1H); 13.7 (br, 1H)
570	[DMSO] 2.82 (d, 3H); 8.40 (s, 1H); 8.71 (br, 1H); 13.5 (br, 1H)
571	[DMSO] 1.12 (t, 3H); 3.35 (q, 2H); 8.40 (s, 1H); 8.75 (t, br, 1H); 13.7 (br, 1H)
572	[DMSO] 0.89 (t, 3H); 1.52 (m, 2H); 3.26 (m, 2H); 8.39 (s, 1H); 8.82 (br, 1H)

TABLE 2-continued

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
573	[DMSO] 1.18 (d, 6H); 4.09 (m, 1H); 8.42 (s, 1H); 8.53 (d, br, 1H); 13.5 (br, 1H)
574	[DMSO] 0.59 (m, 2H); 0.74 (m, 2H); 2.85 (m, 1H); 8.37 (s, 1H); 8.72 (d, br, 1H)
575	[DMSO] 0.89 (t, 3H); 1.35 (m, 2H); 1.50 (m, 2H); 3.35 (m, 2H); 8.39 (s, 1H); 8.75 (br, 1H)
576	[DMSO] 1.70 (m, 2H); 2.05 (m, 2H); 2.25 (m, 2H); 4.40 (m, 1H); 8.40 (s, 1H); 8.94 (br, 1H)
591	[DMSO] 0.25 (m, 2H); 0.45 (m, 2H); 1.03 (m, 1H); 3.21 (t, 2H); 8.40 (s, 1H); 8.84 (br, 1H)
599	[DMSO] 0.89 (d, 6H); 1.82 (m, 1H); 3.14 (m, 2H); 8.38 (s, 1H); 8.74 (br, 1H)
601	[CDCl3] 0.96 (d, 6H); 1.51 (m, 2H); 1.70 (m, 1H); 3.49 (m, 2H); 8.59 (s, 1H); 9.02 (br, 1H); 12.2 (br)
603	[DMSO] 3.95 (t, 2H); 5.18 (dd, 2H); 5.89 (m, 1H); 8.40 (s, 1H); 8.85 (t, br, 1H); 13.6 (br, 1H)
612	[CDCl3] 0.91 (t, 3H); 1.24 (d, 3H); 1.40 (m, 2H); 1.54 (m, 2H); 4.18 (m, 1H); 8.57 (s, 1H); 8.90 (d, br, 1H); 12.2 (br, 1H)
620	[CDCl3] 0.94 (t, 6H); 1.51 (m, 2H); 1.67 (m, 2H); 3.99 (m, 1H); 8.57 (s, 1H); 8.82 (d, br, 1H)
626	[DMSO] 3.29 (s, 3H); 3.48 (m, 4H); 8.41 (s, 1H); 8.78 (br, 1H); 13.7 (br, 1H)
633	[CDCl3] 1.28 (d, 3H); 3.40 (s, 3H); 3.45 (m, 2H); 4.37 (m, 1H); 8.48 (s, 1H); 8.78 (br, 1H)
635	[DMSO] 1.75 (m, 2H); 3.25 (s, 3H); 3.39 (m, 4H); 8.40 (s, 1H); 8.81 (br, 1H); 13.6 (br, 1H)
797	[DMSO] 8.27 (br, 1H); 8.38 (br, 1H); 8.52 (s, 1H); 13.7 (br, 1H)
798	[DMSO] 2.82 (d, 3H); 8.40 (s, 1H); 8.75 (d, br, 1H); 13.6 (br, 1H)
799	[DMSO] 1.12 (t, 3H); 3.33 (m, 2H); 8.41 (s, 1H); 8.78 (t, br, 1H); 13.6 (br, 1H)
800	[DMSO] 0.89 (t, 3H); 1.52 (m, 2H); 3.27 (q, 2H); 8.41 (s, 1H); 8.76 (t, br, 1H); 13.5 (br, 1H)
801	[DMSO] 1.18 (d, 6H); 4.09 (m, 1H); 8.42 (s, 1H); 8.60 (d, br, 1H)
802	[DMSO] 0.55 (m, 2H); 0.75 (m, 2H); 2.85 (m, 1H); 8.31 (s, 1H); 9.24 (br, 1H); 13.4 (br, 1H)
803	[DMSO] 0.89 (t, 3H); 1.33 (m, 2H); 1.51 (m, 2H); 3.30 (m, 2H); 8.40 (s, 1H); 8.75 (t, br, 1H), 13.4 (br)
804	[DMSO] 1.70 (m, 2H); 2.04 (m, 2H); 2.25 (m, 2H); 4.39 (m, 1H); 8.43 (s, 1H); 8.95 (d, br, 1H); 13.4 (br, 1H)
806	[DMSO] 2.82 (s, 3H); 2.98 (s, 3H); 8.06 (s, 1H); 12.6 (s, br, 1H)
811	[CDCl3] 1.24 (t, 6H); 3.44 (m, 4H); 7.72 (s, 1H)
819	[DMSO] 0.25 (m, 2H); 0.46 (m, 2H); 1.03 (m, 1H); 3.20 (t, 2H); 8.45 (s, 1H); 8.87 (t, br, 1H); 13.4 (br, 1H)
821	[DMSO] 0.90 (s, 9H); 3.13 (d, 2H); 8.37 (s, 1H); 8.61 (t, br, 1H); 13.4 (br, 1H)
827	[DMSO] 0.88 (d, 6H); 1.82 (m, 1H); 3.13 (t, 2H); 8.40 (s, 1H); 8.76 (t, br, 1H); 13.5 (br, 1H)
829	[DMSO] 0.90 (d, 6H); 1.42 (m, 2H); 1.61 (m, 1H); 3.30 (m, 2H); 8.41 (s, 1H); 8.76 (t, br, 1H); 13.5 (br, 1H)
831	[DMSO] 3.95 (t, 2H); 5.19 (dd, 2H); 5.89 (m, 1H); 8.41 (s, 1H); 8.88 (t, br, 1H); 13.5 (br, 1H)
835	[DMSO] 1.72 (s, 3H); 3.87 (d, 2H); 4.86 (d, 2H); 8.39 (s, 1H); 8.90 (t, br, 1H); 13.4 (br, 1H)
836	[DMSO] 3.18 (m, 1H); 4.10 (m, 2H); 8.36 (s, 1H); 9.01 (t, br, 1H); 13.4 (br, 1H)
838	[DMSO] 0.88 (t, 3H); 1.14 (d, 3H); 1.51 (m, 2H); 3.91 (m, 1H); 8.41 (s, 1H); 8.54 (d, br, 1H); 13.5 (br, 1H)
840	[DMSO] 0.88 (t, 3H); 1.14 (d, 3H); 1.33 (m, 2H); 1.47 (m, 2H); 4.01 (m, 1H); 8.42 (s, 1H); 853 (d, br, 1H); 13.5 (br, 1H)
841	[DMSO] 0.85 (t, 3H); 1.14 (d, 3H); 1.28 (m, 6H); 1.49 (m, 2H); 3.98 (m, 1H); 8.41 (s, 1H); 8.60 (d, br, 1H); 13.5 (br, 1H)
844	[DMSO] 0.87 (d, 6H); 1.14 (d, 3H); 1.27 (m, 1H); 1.48 (m, 1H); 1.62 (m, 1H); 4.09 (m, 1H); 8.41 (s, 1H); 8.52 (d, br, 1H); 13.5 (br, 1H)
845	[DMSO] 0.90 (s, 9H); 1.08 (d, 3H); 3.90 (m, 1H); 8.35 (s, 1H); 8.38 (d, br, 1H); 13.4 (br)
846	[DMSO] 0.89 (d, 6H); 1.12 (d, 3H); 1.75 (m, 1H); 3.87 (m, 1H); 8.40 (s, 1H); 8.50 (d, br, 1H); 13.5 (br)
848	[DMSO] 0.87 (t, 6H); 1.44 (m, 2H); 1.55 (m, 2H); 3.79 (m, 1H); 8.40 (s, 1H); 8.42 (d, br, 1H); 13.4 (br, 1H)
851	[CDCl3] 3.42 (s, 6H); 3.63 (t, 2H); 4.50 (t, 1H); 8.55 (s, 1H); 8.95 (t, br, 1H); 12.1 (br, 1H)
853	[CDCl3] 3.65 (m, 2H); 3.86 (m, 2H); 8.47 (s, 1H); 8.98 (br, 1H)
854	[CDCl3] 3.39 (s, 3H); 3.58 (m, 2H); 3.69 (m, 2H); 8.49 (s, 1H); 8.80 (br, 1H); 11.9 (br, 1H)
861	[CDCl3] 1.28 (d, 3H); 3.38 (s, 3H); 3.45 (m, 2H); 4.39 (m, 1H); 8.51 (s, 1H); 8.85 (br, 1H); 12.4 (br, 1H)
863	[CDCl3] 1.90 (m, 2H); 3.40 (s, 3H); 3.57 (m, 4H); 8.30 (s, 1H); 8.70 (br, 1H)
868	[CDCl3] 3.80 (s, 3H); 4.25 (d, 2H); 8.52 (s, 1H); 9.16 (br, 1H)
909	[DMSO] 8.22 (br, 1H); 8.32 (br, 1H); 8.61 (s, 1H); 13.8 (br, 1H)
910	[DMSO] 2.83 (d, 3H); 8.51 (s, 1H); 8.74 (br, 1H); 13.7 (br, 1H)
911	[DMSO] 1.12 (t, 3H); 3.32 (q, 2H); 8.54 (s, 1H); 8.75 (t, br, 1H); 13.7 (br, 1H)
912	[DMSO] 0.89 (t, 3H); 1.52 (m, 2H); 3.25 (q, 2H); 8.54 (s, 1H); 8.75 (t, br, 1H); 13.6 (br, 1H)
913	[CDCl3] 1.25 (d, 6H); 4.25 (m, 1H); 8.54 (br, 1H); 8.70 (s, 1H)
914	[DMSO] 0.58 (m, 2H); 0.75. (m, 2H); 2.86 (m, 1H); 8.50 (s, 1H); 8.75 (d, 1H); 13.6 (br, 1H)
915	[DMSO] 0.89 (t, 3H); 1.32 (m, 2H); 1.50 (m, 2H); 3.32 (m, 2H); 8.53 (s, 1H); 8.74 (t, br, 1H), 13.5 (br)
916	[DMSO] 1.70 (m, 2H); 2.05 (m, 2H); 2.25 (m, 2H); 4.40 (m, 1H); 8.52 (s, 1H); 8.98 (d, br, 1H); 13.5 (br, 1H)
917	[CDCl3] 1.50 (s, 9H); 8.65 (s, 1H); 8.80 (s, br, 1H); 12.3 (br, 1H)
918	[DMSO] 2.82 (s, 3H); 2.99 (s, 3H); 8.14 (s, 1H); 12.6 (br, 1H)
923	[DMSO] 1.02 (t, 3H); 1.12 (t, 3H); 3.10 (q, 2H); 3.40 (9, 2H); 8.15 (s, 1H); 12.5 (br, 1H)
931	[DMSO] 0.24 (m, 2H); 0.46 (m, 2H); 1.04 (m, 1H); 3.18 (t, 2H); 8.55 (s, 1H); 8.82 (t, br, 1H)
933	[DMSO] 0.90 (s, 9H); 3.13 (d, 2H); 8.50 (s, 1H); 8.61 (t, br, 1H)
939	[DMSO] 0.88 (d, 6H); 1.83 (m, 1H); 3.14 (t, 2H); 8.52 (s, 1H); 8.72 (t, br, 1H); 13.6 (br, 1H)
941	[DMSO] 0.90 (d, 6H); 1.43 (m, 2H); 1.62 (m, 1H); 3.35 (m, 2H); 8.52 (s, 1H); 8.72 (t, br, 1H); 13.5 (br, 1H)
943	[DMSO] 3.94 (t, 2H); 5.18 (dd, 2H); 5.89 (m, 1H); 8.52 (s, 1H); 8.85 (t, br, 1H)
947	[DMSO] 1.72 (s, 3H); 3.87 (d, 2H); 4.85 (d, 2H); 8.51 (s, 1H); 8.87 (t, br, 1H); 13.5 (br)

TABLE 2-continued

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
948	[DMSO] 3.18 (m, 1H); 4.12 (m, 2H); 8.50 (s, 1H); 9.00 (t, br, 1H)
950	[DMSO] 0.92 (t, 3H); 1.21 (d, 3H); 1.57 (m, 2H); 3.97 (m, 1H); 8.55 (d, br, 1H); 8.60 (s, 1H); 13.7 (br, 1H)
952	[CDCl3] 0.90 (t, 3H); 1.24 (d, 3H); 1.40 (m, 2H); 1.55 (m, 2H); 4.18 (m, 1H); 8.72 (s, 1H); 8.90 (d, br, 1H)
953	[DMSO] 0.77 (t, 3H); 1.15 (d, 3H); 1.27 (m, 6H); 1.49 (m, 2H); 3.99 (m, 1H); 8.50 (d, br, 1H); 8.55 (s, 1H); 13.6 (br)
956	[DMSO] 0.88 (d, 6H); 1.15 (d, 3H); 1.27 (m, 1H); 1.48 (m, 1H); 1.62 (m, 1H); 4.10 (m, 1H); 8.50 (d, br, 1H); 8.55 (s, 1H); 13.6 (br, 1H)
957	[DMSO] 0.91 (s, 9H); 1.09 (d, 3H); 3.80 (m, 1H); 8.39 (d, br, 1H); 8.49 (s, 1H); 13.6 (br, 1H)
958	[DMSO] 0.89 (d, 6H); 1.11 (d, 3H); 1.75 (m, 1H); 3.86 (m, 1H); 8.48 (d, br, 1H); 8.52 (s, 1H); 13.6 (br)
960	[CDCl3] 0.95 (t, 6H); 1.50 (m, 2H); 1.62 (m, 2H); 4.00 (m, 1H); 8.73 (s, 1H); 8.90 (d, br, 1H)
963	[CDCl3] 3.43 (s, 6H); 3.65 (t, 2H); 4.50 (t, 1H); 8.62 (s, 1H); 8.78 (br, 1H)
965	[DMSO] 3.40 (m, 2H); 3.52 (m, 2H); 8.57 (s, 1H); 8.78 (t, br, 1H); 13.6 (br, 1H)
966	[DMSO] 3.29 (s, 3H); 3.48 (m, 4H); 8.54 (s, 1H); 8.78 (br, 1H); 13.6 (br, 1H)
973	[CDCl3] 1.29 (d, 3H); 3.40 (s, 3H); 3.45 (m, 2H); 4.36 (m, 1H); 8.60 (s, 1H); 8.72 (br, 1H)
975	[DMSO] 1.75 (m, 2H); 3.20 (s, 3H); 3.38 (m, 4H); 8.51 (s, 1H); 8.81 (t, br, 1H); 13.6 (br)
1023	[DMSO] 8.22 (br, 1H); 8.35 (br, 1H); 8.61 (s, 1H); 13.8 (br, 1H)
1024	[DMSO] 2.82 (d, 3H); 8.50 (s, 1H); 8.75 (br, 1H); 13.7 (br, 1H)
1025	[DMSO] 1.13 (t, 3H); 3.35 (m, 2H); 8.52 (s, 1H); 8.75 (br, 1H); 13.5 (br, 1H)
1026	[DMSO] 0.90 (t, 3H); 1.53 (m, 2H); 3.25 (m, 2H); 8.52 (s, 1H); 8.75 (t, br, 1H); 13.5 (br, 1H)
1027	[DMSO] 1.18 (d, 6H); 4.08 (m, 1H); 8.54 (s, 1H); 8.56 (br, 1H)
1028	[DMSO] 0.58 (m, 2H); 0.75 (m, 2H); 3.86 (m, 1H); 8.48 (s, 1H); 8.75 (br, 1H)
1029	[DMSO] 0.89 (t, 3H); 1.34 (m, 2H); 1.50 (m, 2H); 3.26 (m, 2H); 8.51 (s, 1H); 8.81 (br, 1H); 13.6 (br, 1H)
1030	[DMSO] 1.70 (m, 2H); 2.04 (m, 2H); 2.25 (m, 2H); 4.39 (m, 1H); 8.53 (s, 1H); 8.91 (d, br, 1H); 13.4 (br, 1H)
1031	[CDCl3] 1.46 (s, 9H); 8.63 (s, 1H); 8.83 (br, 1H); 111.9 (br, 1H)
1032	[DMSO] 2.82 (s, br, 3H); 2.96 (s, br, 3H); 8.11 (s, 1H); 12.5 (br, 1H)
1037	[CDCl3] 1.23 (t, 6H); 3.42 (br, 4H); 7.88 (s, 1H)
1045	[DMSO] 0.25 (m, 2H); 0.46 (m, 2H); 1.04 (m, 1H); 3.20 (t, 2H); 8.55 (s, 1H); 8.82 (t, br, 1H); 13.6 (br, 1H)
1047	[DMSO] 0.90 (s, 9H); 3.13 (d, 2H); 8.48 (s, 1H); 8.61 (t, br, 1H)
1053	[DMSO] 0.90 (d, 6H); 1.82 (m, 1H); 3.13 (m, 2H); 8.50 (s, 1H); 8.75 (br, 1H); 13.5 (br, 1H)
1055	[DMSO] 0.89 (d, 6H); 1.41 (m, 2H); 1.61 (m, 1H); 3.31 (m, 2H); 8.49 (s, 1H); 8.90 (br, 1H); 13.5 (br, 1H)
1057	[DMSO] 3.95 (t, 2H); 5.18 (dd, 2H); 5.90 (m, 1H); 8.50 (s, 1H); 8.85 (t, br, 1H)
1061	[CDCl3] 1.80 (s, 3H); 4.03 (d, 2H); 4.93 (d, 2H); 8.76 (s, 1H); 9.22 (t, br, 1H);
1062	[DMSO] 3.18 (m, 1H); 4.10 (m, 2H); 8.48 (s, 1H); 9.00 (br, 1H)
1064	[DMSO] 0.88 (t, 3H); 1.16 (d, 3H); 1.51 (m, 2H); 3.93 (m, 1H); 8.50 (d, br, 1H); 8.55 (s, 1H); 13.6 (br, 1H)
1066	[DMSO] 0.86 (t, 3H); 1.15 (d, 3H); 1.30 (m, 2H); 1.48 (m, 2H); 4.00 (m, 1H); 8.50 (d, br, 1H); 8.52 (s, 1H); 13.6 (br, 1H)
1067	[CDCl3] 0.86 (t, 3H); 1.22 (d, 3H); 1.25 (m, 6H); 1.48 (m, 2H); 4.16 (m, 1H); 8.62 (s, 1H); 8.68 (br, 1H)
1070	[CDCl3] 0.93 (d, 6H); 1.23 (d, 3H); 1.27 (m, 1H); 1.50 (m, 1H); 1.70 (m, 1H); 4.25 (m, 1H); 8.63 (br, 2H)
1071	[CDCl3] 0.95 (s, 9H); 1.17 (d, 3H); 4.08 (m, 1H); 8.70 (s, 1H); 9.00 (d, br, 1H)
1072	[CDCl3] 0.95 (m, 6H); 1.20 (d, 3H); 1.82 (m, 1H); 4.07 (m, 1H); 8.76 (s, 1H); 9.13 (br, 1H)
1074	[CDCl3] 0.92 (t, 6H); 1.50 (m, 2H); 1.65 (m, 2H); 3.96 (m, 1H); 8.72 (s, 1H); 9.00 (d, br, 1H)
1077	[CDCl3] 3.42 (s, 6H); 3.62 (t, 2H); 4.50 (t, 1H); 8.62 (s, 1H); 8.90 (br, 1H)
1079	[CDCl3] 3.65 (m, 2H); 3.85 (m, 2H); 8.64 (s, 1H); 9.22 (br, 1H)
1080	[DMSO] 3.30 (s, 3H); 3.46 (m, 4H); 8.52 (s, 1H); 8.75 (br, 1H)
1087	[CDCl3] 1.29 (d, 3H); 3.39 (s, 3H); 3.45 (m, 2H); 4.37 (m, 1H); 8.66 (s, 1H); 8.98 (br, 1H); 12.50 (br, 1H)
1089	[DMSO] 1.75 (m, 2H); 3.23 (s, 3H); 3.38 (m, 4H); 8.52 (s, 1H); 8.80 (t, br, 1H)
1094	[CDCl3] 3.80 (s, 3H); 4.24 (d, 2H); 8.61 (s, 1H); 9.19 (br, 1H)
1138	[DMSO] 2.83 (d, 3H); 7.07 (t, 1H); 8.40 (s, 1H); 8.94 (br, 1H); 13.4 (br, 1H)
1139	[DMSO] 1.12 (t, 3H); 3.33 (m, 2H); 7.08 (t, 1H); 8.40 (s, 1H); 9.00 (br, 1H); 13.4 (br, 1H)
1171	[DMSO] 3.90 (t, 2H); 5.15 (dd, 2H); 5.90 (m, 1H); 7.10 (t, 1H); 8.40 (s, 1H); 9.16 (br, 1H); 13.4 (br, 1H)
1178	[CDCl3] 0.95 (t, 3H); 1.21 (d, 3H); 1.58 (m, 2H); 4.08 (m, 1H); 6.86 (t, 1H); 8.70 (s, 1H); 9.34 (d, br, 1H); 12.9 (br, 1H)
1180	[CDCl3] 0.93 (t, 3H); 1.21 (d, 3H); 1.40 (m, 2H); 1.52 (m, 2H); 4.16 (m, 1H); 6.87 (t, 1H); 8.70 (s, 1H); 9.31 (d, br, 1H); 12.9 (br, 1H)
1188	[CDCl3] 0.92 (t, 6H); 1.50 (m, 2H); 1.65 (m, 2H); 3.98 (m, 1H); 6.86 (t, 1H); 8.71 (s, 1H); 9.28 (d, br, 1H); 12.9 (br, 1H)
1201	[CDCl3] 1.27 (d, 3H); 3.40 (s, 3H); 3.43 (m, 2H); 4.37 (m, 1H); 6.85 (t, 1H); 8.68 (s, 1H); 9.42 (d, br, 1H); 12.7 (br, 1H)
1251	[DMSO] 8.26 (br, 1H), 8.42 (br, 1H); 8.62 (s, 1H)
1252	[CDCl3] 3.00 (d, 3H); 8.66 (s, 1H); 8.82 (br, 1H)
1253	[CDCl3] 1.24 (t, 3H); 3.50 (m, 2H); 8.68 (s, 1H); 8.86 (br, 1H)
1254	[CDCl3] 1.00 (t, 3H); 1.62 (m, 2H); 3.42 (m, 2H); 8.67 (s, 1H); 8.90 (br, 1H)
1255	[CDCl3] 1.25 (d, 6H); 4.25 (m, 1H); 8.70 (s, 1H); 8.84 (br, 1H)
1256	[CDCl3] 0.60 (m, 2H); 0.89. (m, 2H); 3.00 (m, 1H); 8.70 (s, 1H); 9.00 (br, 1H)

TABLE 2-continued

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
1257	[CDCl3] 0.96 (t, 3H); 1.42. (m, 2H); 1.60 (m, 2H); 3.45 (m, 2H); 8.70 (s, 1H); 8.88 (br, 1H); 12.1 (br, 1H)
1258	[CDCl3] 1.77 (m, 2H); 1.98. (m, 2H); 2.43 (m, 2H); 4.55 (m, 1H); 8.68 (s, 1H); 9.13 (br, 1H); 12.5 (br, 1H)
1259	[CDCl3] 1.45 (s, 9H); 8.67 (s, 1H); 8.78 (br, 1H); 12.4 (br, 1H)
1260	[CDCl3] 3.11 (s, 6H); 7.95 (s, 1H)
1265	[CDCl3] 1.25 (t, 6H); 3.45 (br, 4H); 7.89 (s, 1H)
1273	[CDCl3] 0.27 (m, 2H); 0.56. (m, 2H); 1.04 (m, 1H); 3.32 (m, 2H); 8.67 (s, 1H); 8.92 (br, 1H); 12.3 (br, 1H)
1275	[CDCl3] 0.97 (s, 9H); 3.29 (d, 2H); 8.73 (s, 1H); 9.00 (br, 1H); 11.9 (br, 1H)
1281	[CDCl3] 0.98 (d, 6H); 1.89 (m, 1H); 3.29 (t, 2H); 8.70 (s, 1H); 8.98 (br, 1H); 12.1 (br, 1H)
1283	[CDCl3] 0.95 (d, 6H); 1.50 (m, 2H); 1.68 (m 1H); 3.46 (m, 2H); 8.69 (s, 1H); 8.83 (br, 1H); 12.1 (br, 1H)
1285	[CDCl3] 4.09 (t, 2H); 5.22 (dd, 2H); 5.91 (m, 1H); 8.70 (s, 1H); 9.01 (br, 1H); 12.2 (br, 1H)
1289	[DMSO] 0.26 (m, 2H); 0.47 (m, 2H); 1.05 (m, 1H); 3.20 (m, 2H); 6.85 (tt, 1H); 7.25 (br, 1H); 8.45 (d, 1H); 9.15 (br, 1H), 13.4 (br, 1H)
1290	[CDCl3] 2.25 (m, 1H); 4.23 (m, 2H); 8.72 (s, 1H); 9.20 (br, 1H), 12.0 (br, 1H)
1292	[CDCl3] 0.95 (t, 3H); 1.21 (d, 3H); 1.55 (m 2H); 4.10 (m, 1H); 8.70 (s, 1H); 8.82 (br, 1H)
1294	[CDCl3] 0.93 (t, 3H); 1.22 (d, 3H); 1.38 (m, 2H); 1.52 (m, 2H); 4.18 (m, 1H); 8.70 (s, 1H); 8.79 (br, 1H); 12.4 (br, 1H)
1295	[CDCl3] 0.89 (t, 3H); 1.20 (d, 3H); 1.25-1.4 (m, 6H); 1.50 (m, 2H); 4.16 (m, 1H); 8.70 (s, 1H); 8.75 (br, 1H)
1298	[CDCl3] 0.92 (t, 6H); 1.40 (d, 3H); 1.32 (m, 1H); 1.45 (m, 1H); 1.55 (m, 1H); 4.25 (m, 1H); 8.70 (s, 1H); 8.75 (br, 1H); 12.4 (br, 1H)
1299	[CDCl3] 0.95 (s, 9H); 1.15 (d, 3H); 4.10 (m, 1H); 8.72 (s, 1H); 8.88 (br, 1H); 11.9 (br, 1H)
1300	[CDCl3] 0.95 (m, 6H); 1.15 (d, 3H); 1.77 (m, 1H); 4.05 (m, 1H); 8.71 (s, 1H); 8.85 (br, 1H)
1302	[CDCl3] 0.93 (t, 6H); 1.48 (m, 2H); 1.65 (m, 2H); 3.99 (m, 1H); 8.71 (s, 1H); 8.76 (br, 1H); 12.4 (br, 1H)
1305	[CDCl3] 3.40 (s, 6H); 3.62 (t, 2H); 4.50 (t, 1H); 8.60 (s, 1H); 8.74 (br, 1H); 11.7 (br, 1H)
1307	[CDCl3] 3.65 (m, 2H); 3.87 (m, 2H); 4.50 (t, 1H); 8.66 (s, 1H); 9.11 (br, 1H)
1308	[CDCl3] 3.40 (s, 3H); 3.58 (m, 2H); 3.67 (m, 2H); 8.60 (s, 1H); 8.75 (br, 1H); 11.7 (br, 1H)
1315	[CDCl3] 1.48 (d, 3H); 3.38 (s, 3H); 3.44 (m, 2H); 4.38 (m, 1H); 8.62 (s, 1H); 8.72 (br, 1H); 12.1 (br, 1H)
1317	[CDCl3] 1.90 (m, 2H); 3.40 (s, 3H); 3.58 (m, 4H); 8.39 (s, 1H); 8.62 (br, 1H)
1322	[CDCl3] 3.79 (s, 3H); 4.25 (d, 2H); 8.65 (s, 1H); 9.18 (br, 1H)
1365	[DMSO] 8.24 (br, 1H), 8.42 (br, 1H); 8.81 (s, 1H); 13.6 (br, 1H)
1366	[DMSO] 8.19 (br, 1H), 8.34 (br, 1H); 8.78 (s, 1H); 13.7 (br, 1H)
1368	[DMSO] 2.83 (d, 3H); 6.81 (tt, 1H); 7.22 (br, 1H); 8.41 (d, 1H); 9.00 (br, 1H); 13.4 (br, 1H)
1369	[DMSO] 1.12 (t, 3H); 3.35 (m, 2H); 6.85 (tt, 1H); 7.20 (br, 1H); 8.41 (d, 1H); 9.20 (br, 1H); 13.4 (br, 1H)
1370	[DMSO] 0.89 (t, 3H); 1.52 (m, 2H); 3.27 (q, 2H); 6.82 (tt, 1H); 7.20 (br, 1H); 8.40 (d, 1H); 9.20 (br, 1H); 13.4 (br, 1H)
1371	[DMSO] 1.18 (d, 6H); 4.09 (m, 1H); 6.82 (tt, 1H); 7.20 (br, 1H); 8.42 (d, 1H); 8.95 (br, 1H); 13.4 (br, 1H)
1372	[DMSO] 0.56 (m, 2H); 0.75 (m, 2H); 2.85 (m, 1H); 6.83 (tt, 1H); 7.21 (br, 1H); 8.40 (d, 1H); 9.05 (br, 1H); 13.4 (br, 1H)
1373	[DMSO] 0.89 (t, 3H); 1.32 (m, 2H); 1.50 (m, 2H); 3.30 (q, 2H); 6.84 (tt, 1H); 7.20 (br, 1H); 8.41 (d, 1H); 9.10 (br, 1H); 13.4 (br, 1H)
1389	[DMSO] 0.26 (m, 2H); 0.47 (m, 2H); 1.05 (m, 1H); 3.20 (m, 2H); 6.85 (tt, 1H); 7.25 (br, 1H); 8.45 (d, 1H); 9.15 (br, 1H), 13.4 (br, 1H)
1391	[DMSO] 0.91 (s, 9H); 3.16 (d, 2H); 6.82 (tt, 1H); 7.10 (br, 1H); 8.41 (d, 1H); 9.20 (br, 1H); 13.3 (br, 1H)
1397	[DMSO] 0.90 (d, 6H); 1.82 (m, 1H); 3.15 (m, 2H); 6.82 (tt, 1H); 7.20 (br, 1H); 8.40 (d, 1H); 9.15 (br, 1H), 13.4 (br, 1H)
1401	[DMSO] 3.95 (m, 2H); 5.18 (dd, 2H); 5.92 (m, 1H); 6.82 (tt, 1H); 7.20 (d, 1H); 8.42 (d, 1H); 9.20 (br, 1H); 13.3 (br, 1H)
1406	[DMSO] 3.15 (t, 1H); 4.13 (m, 2H); 6.82 (tt, 1H); 7.18 (br, 1H); 8.41 (d, 1H); 9.35 (br, 1H); 13.3 (br, 1H)
1408	[DMSO] 0.87 (t, 3H); 1.14 (d, 3H); 1.51 (m, 2H); 3.92 (m, 1H); 6.82 (tt, 1H); 7.20 (br, 1H); 8.41 (d, 1H); 8.90 (br, 1H), 13.4 (br, 1H)
1410	[DMSO] 0.86 (t, 3H); 1.15 (d, 3H); 1.30 (m, 2H); 1.48 (m, 2H); 4.02 (m, 1H); 6.83 (tt, 1H); 7.20 (br, 1H); 8.42 (d, 1H); 8.90 (br, 1H), 13.4 (br, 1H)
1411	[DMSO] 0.88 (t, 3H); 1.15 (d, 3H); 1.27 (m, 6H); 1.49 (m, 2H); 4.00 (m, 1H); 6.82 (tt, 1H); 7.20 (br, 1H); 8.42 (d, 1H); 8.92 (br, 1H), 13.4 (br, 1H)
1414	[DMSO] 0.88 (d, 6H); 1.15 (d, 3H); 1.28 (m, 1H); 1.46 (m, 1H); 1.60 (m, 1H); 4.10 (m, 1H); 6.81 (tt, 1H); 7.20 (br, 1H); 8.42 (d, 1H); 8.90 (br, 1H), 13.4 (br, 1H)
1418	[CDCl3] 0.93 (t, 6H); 1.50 (m, 2H); 1.65 (m, 2H); 4.00 (m, 1H); 6.83 (d, 1H); 8.69 (d, 1H); 9.21 (d, br, 1H); 13.0 (br, 1H)
1421	[CDCl3] 3.41 (s, 6H); 3.52 (t, 2H); 4.50 (t, 1H); 6.12 (tt, 1H); 6.81 (d, 1H); 8.64 (d, 1H); 9.41 (br, 1H); 12.5 (br, 1H)
1424	[CDCl3] 3.37 (s, 3H); 3.56 (m, 2H); 3.67 (m, 2H); 6.11 (tt, 1H); 6.84 (d, 1H); 8.65 (d, 1H); 9.46 (br, 1H), 12.2 (br, 1H)
1431	[CDCl3] 1.28 (d, 3H); 3.39 (s, 3H); 3.45 (m, 2H); 4.40 (m, 1H); 6.10 (tt, 1H); 6.83 (d, 1H); 8.67 (d, 1H); 9.39 (d, br, 1H); 13.0 (br, 1H)
1433	[DMSO] 1.75 (m, 2H); 3.24 (s, 3H); 3.38 (m, 4H); 6.83 (tt, 1H); 7.20 (br, 1H); 8.42 (d, 1H); 9.15 (br, 1H), 13.4 (br, 1H)

TABLE 2-continued

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
1481	[DMSO] 7.42 (br, 1H); 8.10 (br, 1H); 8.40 (br, 1H); 8.46 (d, 1H), 13.6 (br, 1H)
1482	[CDCl3] 3.01 (d, 3H); 6.88 (d, 1H); 8.67 (d, 1H); 9.34 (br, 1H); 12.5 (br, 1H)
1483	[CDCl3] 1.27 (t, 3H); 3.50 (m, 2H); 6.88 (d, 1H); 8.68 (d, 1H); 9.32 (br, 1H); 12.6 (br, 1H)
1484	[CDCl3] 1.00 (t, 3H); 1.63 (m, 2H); 3.41 (m, 2H); 6.88 (d, 1H); 8.70 (d, 1H); 9.38 (br, 1H); 12.9 (br, 1H)
1485	[CDCl3] 1.25 (d, 6H); 4.27 (m, 1H); 6.88 (d, 1H); 8.70 (d, 1H); 9.30 (d, br, 1H); 13.4 (br, 1H)
1486	[CDCl3] 0.62 (m, 2H); 0.86 (m, 2H); 3.01 (m, 1H); 6.88 (d, 1H); 8.70 (d, 1H); 9.41 (br, 1H); 12.6 (br, 1H)
1487	[CDCl3] 0.95 (t, 3H); 1.44 (m, 2H); 1.61 (m, 2H); 3.45 (m, 2H); 6.88 (d, 1H); 8.70 (d, 1H); 9.35 (t, br, 1H); 12.7 (br, 1H)
1488	[CDCl3] 1.78 (m, 2H); 2.00 (m, 2H); 2.42 (m, 2H); 4.58 (m, 1H); 6.88 (d, 1H); 8.68 (d, 1H); 9.60 (d, br, 1H); 13.3 (br, 1H)
1503	[CDCl3] 0.26 (m, 2H); 0.55 (m, 2H); 1.06 (m, 1H); 3.33 (m, 2H); 6.88 (d, 1H); 8.70 (d, 1H); 9.45 (br, 1H); 12.9 (br, 1H)
1505	[CDCl3] 0.98 (s, 9H); 3.30 (d, 2H); 6.88 (d, 1H); 8.72 (d, 1H); 9.43 (t, br, 1H); 12.5 (br, 1H)
1511	[CDCl3] 0.98 (d, 6H); 1.90 (m, 1H); 3.30 (m, 2H); 6.88 (d, 1H); 8.70 (d, 1H); 9.42 (t, br, 1H)
1513	[CDCl3] 0.85 (d, 6H); 1.51 (m, 2H); 1.70 (m, 1H); 3.47 (m, 2H); 6.88 (d, 1H); 8.70 (d, 1H); 9.32 (t, br, 1H); 12.7 (br, 1H)
1515	[CDCl3] 4.10 (t, 2H); 5.25 (dd, 2H); 5.91 (m, 1H); 6.88 (d, 1H); 8.70 (d, 1H); 9.47 (br, 1H); 12.8 (br, 1H)
1519	[DMSO] 1.71 (s, 3H); 3.88 (d, 2H); 4.84 (d, 2H); 7.35 (br, 1H); 8.41 (d, 1H); 9.02 (br, 1H); 13.4 (br, 1H)
1520	[DMSO] 3.15 (m, 1H); 4.12 (m, 2H); 7.36 (d, br, 1H); 8.42 (d, 1H); 9.15 (br, 1H), 13.4 (br, 1H)
1522	[CDCl3] 0.95 (t, 3H); 1.22 (d, 3H); 1.59 (m, 2H); 4.11 (m, 1H); 6.88 (d, 1H); 8.71 (d, 1H); 9.28 (d, br, 1H); 13.4 (br, 1H)
1524	[CDCl3] 0.92 (t, 3H); 1.23 (d, 3H); 1.40 (m, 2H); 1.52 (m, 2H); 4.20 (m, 1H); 6.89 (d, 1H); 8.71 (d, 1H); 9.27 (d, br, 1H); 13.4 (br, 1H)
1525	[CDCl3] 0.88 (t, 3H); 1.23 (d, 3H); 1.25-1.4 (m, 6H); 1.55 (m, 2H); 4.18 (m, 1H); 7.89 (d, 1H); 8.70 (d, 1H); 9.28 (br, 1H); 13.2 (br, 1H)
1528	[CDCl3] 0.92 (d, 6H); 1.22 (d, 3H), 1.35 (m, 1H); 1.50 (m, 1H); 1.68 (m, 1H); 4.28 (m, 1H); 6.89 (d, 1H); 8.71 (d, 1H); 9.26 (d, br, 1H); 13.3 (br, 1H)
1529	[CDCl3] 0.95 (s, 9H); 1.17 (d, 3H); 4.12 (m, 1H); 6.89 (d, 1H); 8.73 (d, 1H); 9.30 (d, br, 1H), 12.8 (br, 1H)
1530	[CDCl3] 0.95 (dt, 6H); 1.17 (d, 3H); 1.82 (m, 1H); 4.08 (m, 1H); 6.89 (d, 1H); 8.72 (d, 1H); 9.31 (d, br, 1H); 13.2 (br, 1H)
1532	[CDCl3] 0.95 (t, 6H); 1.50 (m, 2H); 1.66 (m, 2H); 4.00 (m, 1H); 6.89 (d, 1H); 8.72 (d, 1H); 9.21 (d, br, 1H); 13.3 (br, 1H)
1535	[DMSO] 3.32 (s, 6H); 3.45 (t, 2H); 4.50 (t, 1H); 7.33 (d, br, 1H); 8.43 (d, 1H); 8.92 (br, 1H); 13.4 (br, 1H)
1537	[DMSO] 3.38 (m, 2H); 3.52 (m, 2H); 4.80 (br, 1H); 7.37 (br, 1H); 8.45 (d, 1H); 8.96 (br, 1H); 13.4 (br, 1H)
1538	[DMSO] 3.25 (s, 3H); 3.49 (m, 4H); 7.37 (d, br, 1H); 8.44 (d, 1H); 8.97 (br, 1H); 13.5 (br, 1H)
1545	[DMSO] 1.15 (d, 3H); 3.27 (s, 3H); 3.40 (m, 2H); 4.19 (m, 1H); 7.35 (d, br, 1H); 8.43 (d, 1H); 8.82 (br, 1H); 13.4 (br, 1H)
1547	[DMSO] 1.75 (m, 2H); 3.25 (s, 3H); 3.40 (m, 4H); 7.38 (br, 1H); 8.40 (d, 1H); 8.94 (br, 1H); 13.4 (br, 1H)
1595	[DMSO] 7.45 (d, 1H); 8.15 (br, 1H); 8.40 (br, 1H); 8.50 (d, 1H); 13.7 (br, 1H)
1596	[DMSO] 2.82 (d, 3H); 7.42 (d, 1H); 8.41 (d, 1H); 8.80 (br, 1H); 13.4 (br, 1H)
1597	[DMSO] 1.12 (t, 3H); 3.31 (m, 2H); 7.41 (d, 1H); 8.41 (d, 1H); 8.85 (br, 1H); 13.45 (br, 1H)
1598	[DMSO] 0.90 (t, 3H); 1.54 (m, 2H); 3.25 (q, 2H); 7.41 (d, 1H); 8.40 (d, 1H); 8.85 (br, 1H); 13.45 (br)
1599	[DMSO] 1.17 (d, 6H); 4.10 (m, 1H); 7.40 (d, 1H); 8.41 (d, 1H); 8.67 (d, br, 1H); 13.4 (br, 1H)
1600	[DMSO] 0.57 (m, 2H); 0.75 (m, 2H); 2.86 (m, 1H); 7.41 (d, 1H); 8.37 (d, 1H); 8.80 (br, 1H); 13.35 (br, 1H)
1601	[CDCl3] 0.95 (t, 3H); 1.40 (m, 2H); 1.60 (m, 2H); 3.45 (q, 2H); 6.88 (d, 1H); 8.71 (d, 1H); 9.28 (br, 1H); 12.9 (br, 1H)
1602	[CDCl3] 1.78 (m, 2H); 1.95 (m, 2H); 2.40 (m, 2H); 4.57 (m, 1H); 6.86 (d, 1H); 8.70 (d, 1H); 9.45 (d, br, 1H); 12.9 (br, 1H)
1603	[CDCl3] 1.45 (s, 9H); 6.85 (d, 1H); 8.67 (d, 1H); 9.15 (br, 1H); 12.6 (br, 1H)
1604	[CDCl3] 3.05 (s, 6H); 7.07 (d, 1H); 7.80 (d, 1H)
1609	[CDCl3] 1.22 (t, 6H); 3.40 (m, 4H); 7.02 (d, 1H); 7.72 (d, 1H)
1617	[DMSO] 0.25 (m, 2H), 0.46 (m, 2H); 1.05 (m, 1H); 3.22 (m, 2H); 7.45 (d, br, 1H); 8.45 (d, 1H); 8.95 (br, 1H); 13.4 (br, 1H)
1619	[DMSO] 0.90 (s, 9H), 3.15 (d, 2H); 7.38 (d, br, 1H); 8.40 (d, 1H); 8.80 (br, 1H); 13.4 (br, 1H)
1625	[DMSO] 0.90 (d, 6H); 1.82 (m, 1H); 3.14 (t, 2H); 7.39 (d, 1H); 8.40 (d, 1H); 8.91 (t, br, 1H)
1627	[CDCl3] 0.92 (d, 6H); 1.49 (m, 2H); 1.68 (m, 1H); 3.46 (m, 2H); 6.87 (d, 1H); 8.70 (d, 1H); 9.22 (br, 1H); 12.8 (br, 1H)
1629	[DMSO] 3.95 (m, 2H); 5.15 (dd, 2H); 5.90 (m, 1H); 7.40 (d, 1H); 8.40 (d, 1H); 8.95 (br, 1H); 13.4 (br, 1H)
1633	[CDCl3] 1.78 (s, 3H); 4.02 (d, 2H); 4.88 (d, 2H); 6.87 (d 1H); 8.72 (d, 1H); 9.42 (br, 1H); 12.7 (br, 1H)
1634	[CDCl3] 2.23 (m, 1H); 4.23 (m, 2H); 6.88 (d, 1H); 8.73 (d, 1H); 9.51 (br, 1H), 12.8 (br, 1H)
1636	[DMSO] 0.89 (t, 3H); 1.14 (d, 3H); 1.51 (m, 2H); 3.95 (m, 1H); 7.41 (d, 1H); 8.40 (d, 1H); 8.60 (br, 1H); 13.6 (br, 1H)

TABLE 2-continued

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
1638	[DMSO] 0.87 (t, 3H); 1.15 (d, 3H); 1.32 (m, 2H); 1.46 (m, 2H); 4.03 (m, 1H); 7.40 (d, 1H); 8.40 (d, 1H); 8.51 (br, 1H); 13.4 (br, 1H)
1639	[CDCl3] 0.88 (t, 3H); 1.21 (d, 3H); 1.32 (m, 6H); 1.50 (m, 2H); 4.18 (m, 1H); 6.88 (d, 1H); 8.71 (d, 1H); 9.12 (d, br, 1H), 12.9 (br, 1H)
1642	[CDCl3] 0.92 (t, 6H); 1.20 (d, 3H); 1.32 (m, 1H); 1.46 (m, 1H); 1.67 (m, 1H); 4.27 (m, 1H); 6.88 (d, 1H); 8.71 (d, 1H); 9.12 (d, br, 1H), 12.9 (br, 1H)
1643	[CDCl3] 0.93 (s, 9H); 1.15 (d, 3H); 4.12 (m, 1H); 6.88 (d, 1H); 8.72 (d, 1H); 9.22 (d, br, 1H)
1644	[CDCl3] 0.95 (m, 6H); 1.15 (d, 3H); 1.78 (m, 1H); 4.05 (m, 1H); 6.88 (d, 1H); 8.72 (d, 1H); 9.18 (d, br, 1H); 12.7 (br, 1H)
1646	[DMSO] 0.87 (t, 6H); 1.45 (m, 2H); 1.55 (m, 2H); 3.81 (m, 1H); 7.40 (d, 1H); 8.40 (d, 1H); 8.52 (d, br, 1H); 13.4 (br, 1H)
1649	[CDCl3] 3.40 (s, 6H); 3.61 (t, 2H); 4.50 (t, 1H); 6.87 (d, 1H); 8.69 (d, 1H); 9.32 (br, 1H); 12.3 (br, 1H)
1651	[CDCl3] 3.63 (m, 2H); 3.84 (m, 2H); 6.88 (d, 1H); 8.68 (d, 1H); 9.60 (br, 1H)
1652	[DMSO] 3.25 (s, 3H); 3.50 (m, 4H); 7.40 (d, br, 1H); 8.45 (d, 1H); 8.92 (br, 1H); 13.5 (br, 1H)
1659	[DMSO] 1.15 (d, 3H); 3.25 (s, 3H); 3.38 (m, 2H); 4.17 (m, 1H); 7.40 (d, br, 1H); 8.43 (d, 1H); 8.75 (br, 1H); 13.5 (br, 1H)
1661	[DMSO] 1.74 (m, 2H); 3.22 (s, 3H); 3.37 (m, 4H); 7.42 (d, br, 1H); 8.42 (d, 1H); 8.90 (br, 1H); 13.4 (br, 1H)
1666	[CDCl3] 3.77 (s, 3H); 4.23 (d, 2H); 6.87 (d, 1H); 8.67 (d, 1H); 9.65 (br, 1H); 12.1 (br, 1H)
1711	[DMSO] 2.83 (d, 3H); 8.39 (s, 1H); 8.72 (d, br, 1H); 13.5 (br)
1712	[DMSO] 1.11 (t, 3H); 3.30 (m, 2H); 8.40 (s, 1H); 8.75 (t, br, 1H)
1713	[CDCl3] 0.99 (t, 3H); 1.62 (m, 2H); 3.41 (q, 2H); 8.56 (s, 1H); 9.00 (br, 1H)
1714	[CDCl3] 1.24 (d, 6H); 4.22 (m, 1H); 8.41 (s, 1H); 9.17 (br, 1H)
1715	[CDCl3] 0.61 (m, 2H); 0.90 (m, 2H); 2.95 (m, 1H); 8.57 (s, 1H); 9.02 (br, 1H)
1716	[CDCl3] 0.94 (t, 3H); 1.41 (m, 2H); 1.58 (m, 2H); 3.45 (m, 2H); 8.54 (s, 1H); 9.05 (br, 1H)
1717	[CDCl3] 1.80 (m, 2H); 1.98 (m, 2H); 2.42 (m, 2H); 4.55 (m, 1H); 8.55 (s, 1H); 9.01 (br, 1H); 12.0 (br, 1H)
1719	[DMSO] 2.83 (s, 3H); 2.97 (s, 3H); 8.04 (s, 1H); 12.6 (br, 1H)
1720	[DMSO] 1.03 (t, 3H); 1.15 (t, 3H); 3.12 (q, 2H); 3.45 (q, 2H); 8.05 (s, 1H); 12.5 (br, 1H)
1721	[CDCl3] 0.25 (m, 2H); 0.55 (m, 2H); 1.05 (m, 1H); 3.32 (m, 2H); 8.57 (s, 1H); 8.93 (br, 1H); 12.1 (br, 1H)
1722	[CDCl3] 0.96 (s, 9H); 3.28 (d, 2H); 8.59 (s, 1H); 9.05 (br, 1H)
1723	[CDCl3] 0.95 (d, 6H); 1.90 (m, 1H); 3.29 (t, 2H); 8.59 (s, 1H); 9.00 (br, 1H); 12.0 (br, 1H)
1725	[CDCl3] 0.94 (d, 6H); 1.49 (q, 2H); 1.65 (m, 1H); 3.45 (m, 2H); 8.59 (s, 1H); 8.93 (br, 1H); 12.1 (br, 1H)
1727	[CDCl3] 4.08 (m, 2H); 5.21 (dd, 2H); 5.90 (m, 1H); 8.60 (s, 1H); 9.05 (br, 1H); 12.1 (br, 1H)
1728	[CDCl3] 1.78 (s, 3H); 4.01 (d, 2H); 4.90 (d, 2H); 8.61 (s, 1H); 9.09 (bt, 1H); 11.9 (br, 1H)
1729	[CDCl3] 2.25 (m, 1H); 4.23 (m, 2H); 8.63 (s, 1H); 9.23 (br, 1H); 11.9 (br, 1H)
1731	[CDCl3] 0.95 (t, 3H); 1.23 (d, 3H); 1.58 (m, 2H); 4.11 (m, 1H); 8.55 (s, 1H); 8.60 (br, 1H)
1733	[CDCl3] 0.92 (t, 3H); 1.23 (d, 3H); 1.39 (m, 2H); 1.52 (m, 2H); 4.20 (m, 1H); 8.55 (s, 1H); 8.66 (br, 1H)
1734	[CDCl3] 0.87 (t, 3H); 1.22 (d, 3H); 1.35 (m, 6H); 1.52 (m, 2H); 4.17 (m, 1H); 8.52 (s, 1H); 8.61 (br, 1H)
1735	[CDCl3] 0.94 (m, 6H); 1.23 (d, 3H); 1.33 (m, 1H); 1.45 (m, 1H); 1.65 (m, 1H); 4.27 (m, 1H); 8.56 (s, 1H); 8.63 (br, 1H); 11.9 (br)
1736	[CDCl3] 0.96 (s, 9H); 1.17 (d, 3H); 4.08 (m, 1H); 8.57 (s, 1H); 8.80 (d, br, 1H)
1737	[CDCl3] 0.95 (m, 6H); 1.18 (d, 3H); 1.80 (m, 1H); 4.05 (m, 1H); 8.57 (s, 1H); 8.73 (d, br, 1H)
1738	[DMSO] 0.87 (t, 6H), 1.45 (m, 2H), 1.55 (m, 2H); 3.80 (m, 1H); 8.40 (s, 1H); 8.42 (d, br, 1H); 13.4 (br, 1H)
1739	[CDCl3] 3.42 (s, 6H); 3.63 (t, 2H); 4.50 (t, 1H); 8.49 (s, 1H); 8.74 (br, 1H); 11.4 (br, 1H)
1741	[CDCl3] 3.65 (m, 2H); 3.85 (m, 2H); 8.55 (s, 1H); 9.16 (br, 1H)
1742	[CDCl3] 3.40 (s, 3H); 3.57 (m, 2H); 3.67 (m, 2H); 8.47 (s, 1H); 8.75 (br, 1H); 11.5 (br, 1H)
1744	[CDCl3] 1.27 (d, 3H); 3.39 (s, 3H); 3.45 (m, 2H); 4.37 (m, 1H); 8.45 (s, 1H); 8.57 (br, 1H); 11.6 (br, 1H)
1745	[CDCl3] 1.90 (m, 2H); 3.40 (s, 3H); 3.56 (m, 4H); 8.27 (s, 1H); 8.65 (br, 1H); 11.8 (br, 1H)
1746	[DMSO] 3.67 (s, 3H); 4.13 (d, 2H); 8.38 (s, 1H); 9.12 (br, 1H); 13.6 (br, 1H)
1751	[DMSO] 8.24 (br, 1H); 8.38 (br, 1H); 8.61 (br, 1H); 13.7 (br, 1H)
1752	[CDCl3] 3.00 (d, 3H); 8.71 (s, 1H); 8.91 (br, 1H); 12.2 (br, 1H)
1753	[CDCl3] 1.23 (t, 3H); 3.49 (m, 2H); 8.71 (s, 1H); 8.89 (br, 1H); 12.1 (br, 1H)
1754	[CDCl3] 0.98 (t, 3H); 1.62 (m, 2H); 3.40 (q, 2H); 8.70 (s, 1H); 8.90 (br, 1H)
1755	[CDCl3] 1.25 (d, 6H); 4.25 (m, 1H); 8.68 (br, 2H); 12.0 (br, 1H)
1756	[CDCl3] 0.61 (m, 2H); 0.89 (m, 2H); 2.95 (m, 1H); 8.70 (s, 1H); 8.97 (br, 1H)
1757	[CDCl3] 0.94 (t, 3H); 1.40 (m, 2H); 1.58 (m, 2H); 3.45 (m, 2H); 8.69 (s, 1H); 8.88 (br, 1H); 12.0 (br, 1H)
1758	[CDCl3] 1.80 (m, 2H); 1.98 (m, 2H); 2.41 (m, 2H); 4.55 (m, 1H); 8.67 (s, 1H); 8.98 (br, 1H); 12.1 (br, 1H)
1759	[CDCl3] 1.32 (s, 9H); 8.50 (br, 1H); 8.60 (s, 1H)
1760	[CDCl3] 3.12 (s, 6H); 7.99 (s, 1H)
1761	[CDCl3] 1.24 (t, 6H); 3.43 (m, 4H); 7.89 (s, 1H)
1762	[CDCl3] 0.28 (m, 2H); 0.55 (m, 2H); 1.03 (m, 1H); 3.31 (m, 2H); 8.67 (s, 1H); 8.85 (br, 1H); 11.9 (br, 1H)
1763	[CDCl3] 0.96 (s, 9H); 3.27 (d, 2H); 8.71 (s, 1H); 9.00 (br, 1H)
1764	[CDCl3] 0.95 (d, 6H); 1.89 (m, 1H); 3.28 (t, 2H); 8.70 (s, 1H); 8.97 (br, 1H)
1766	[CDCl3] 0.95 (d, 6H); 1.48 (q, 2H); 1.65 (m, 1H); 3.45 (m, 2H); 8.69 (s, 1H); 8.85 (br, 1H); 12.0 (br, 1H)

TABLE 2-continued

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
1768	[CDCl3] 4.08 (m, 2H); 5.21 (dd, 2H); 5.89 (m, 1H); 8.71 (s, 1H); 9.02 (br, 1H); 12.1 (br, 1H)
1769	[CDCl3] 1.77 (s, 3H); 4.01 (d, 2H); 4.87 (d, 2H); 8.71 (s, 1H); 9.03 (br, 1H)
1770	[CDCl3] 2.23 (m, 1H); 4.23 (m, 2H); 8.72 (s, 1H); 9.20 (br, 1H); 12.0 (br, 1H)
1772	[CDCl3] 0.95 (t, 3H); 1.21 (d, 3H); 1.55 (m, 2H); 4.10 (m, 1H); 8.67 (br, 1H); 8.70 (s, 1H); 12.1 (br, 1H)
1774	[CDCl3] 0.91 (t, 3H); 1.21 (d, 3H); 1.38 (m, 2H); 1.50 (m, 2H); 4.19 (m, 1H); 8.64 (br, 1H); 8.69 (s, 1H); 12.0 (br, 1H)
1775	[CDCl3] 0.89 (t, 3H); 1.21 (d, 3H); 1.33 (m, 6H); 1.51 (m, 2H); 4.17 (m, 1H); 8.60 (br, 1H); 8.68 (s, 1H)
1776	[CDCl3] 0.90 (m, 6H); 1.21 (d, 3H); 1.31 (m, 1H); 1.45 (m, 1H); 1.64 (m, 1H); 4.25 (m, 1H); 8.60 (br, 1H); 8.69 (s, 1H)
1777	[CDCl3] 0.94 (s, 9H); 1.15 (d, 3H); 4.08 (m, 1H); 8.69 (s, 1H); 8.79 (br, 1H)
1778	[CDCl3] 0.93 (m, 6H); 1.17 (d, 3H); 1.79 (m, 1H); 4.05 (m, 1H); 8.67 (s, 1H); 8.71 (br, 1H)
1780	[CDCl3] 0.92 (t, 6H); 1.48 (m, 2H); 1.62 (m, 2H); 3.96 (m, 1H); 8.61 (s, 1H); 9.16 (d, br, 1H)
1781	[CDCl3] 3.40 (s, 6H); 3.61 (t, 2H); 4.50 (t, 1H); 8.63 (s, 1H); 8.76 (br, 1H)
1783	[CDCl3] 3.64 (m, 2H); 3.86 (m, 2H); 8.68 (s, 1H); 9.17 (br, 1H)
1784	[CDCl3] 3.49 (s, 3H); 3.55 (m, 2H); 3.66 (m, 2H); 8.62 (s, 1H); 8.77 (br, 1H)
1785	[CDCl3] 1.27 (d, 3H); 3.39 (s, 3H); 3.44 (m, 2H); 4.37 (m, 1H); 8.56 (br, 1H); 8.60 (s, 1H); 11.9 (br, 1H)
1786	[CDCl3] 1.90 (m, 2H); 3.40 (s, 3H); 3.58 (m, 4H); 8.40 (s, 1H); 8.65 (br, 1H)
1787	[CDCl3] 3.78 (s, 3H); 4.24 (d, 2H); 8.69 (s, 1H); 9.25 (br, 1H); 11.5 (br, 1H)
1792	[DMSO] 8.22 (br, 1H); 8.37 (br, 1H); 8.81 (br, 1H); 13.7 (br, 1H)
1793	[CDCl3] 3.00 (d, 3H); 8.80 (s, br, 2H); 12.0 (br, 1H)
1794	[CDCl3] 1.24 (t, 3H); 3.49 (m, 2H); 8.40 (s, br, 2H); 12.0 (br, 1H)
1795	[DMSO] 0.89 (t, 3H); 1.53 (m, 2H); 3.26 (q, 2H); 8.72 (s, 1H); 8.78 (t, br, 1H); 13.4 (br, 1H)
1796	[DMSO] 1.18 (d, 6H); 4.08 (m, 1H); 8.60 (d, br, 2H); 13.4 (br, 1H)
1797	[DMSO] 0.60 (m, 2H); 0.75 (m, 2H); 2.88 (m, 1H); 8.68 (s, 1H); 8.77 (d, br, 1H); 13.3 (br, 1H)
1798	[CDCl3] 0.94 (t, 3H); 1.40 (m, 2H); 1.59 (m, 2H); 3.44 (m, 2H); 8.79 (s, br, 2H)
1799	[DMSO] 1.70 (m, 2H); 2.05 (m, 2H); 2.27 (m, 2H); 4.39 (m, 1H); 8.71 (s, 1H); 8.95 (d, br, 1H); 13.4 (br, 1H)
1800	[CDCl3] 1.43 (s, 9H); 8.70 (br, 1H); 8.85 (s, 1H); 11.5 (br)
1801	[CDCl3] 3.10 (s, 6H); 8.20 (s, 1H)
1802	[CDCl3] 1.23 (t, 6H); 3.43 (m, br, 4H); 8.12 (s, 1H)
1803	[DMSO] 0.26 (m, 2H); 0.50 (m, 2H); 1.05 (m, 1H); 3.19 (t, 2H); 8.76 (s, 1H); 8.87 (br, 1H); 13.5 (br, 1H)
1804	[DMSO] 0.91 (s, 9H); 3.13 (d, 2H); 8.61 (t, br, 1H); 8.68 (s, 1H); 13.4 (br, 1H)
1805	[DMSO] 0.89 (d, 6H); 1.84 (m, 1H); 3.14 (t, 2H); 8.70 (s, 1H); 8.75 (t, br, 1H); 13.4 (br, 1H)
1807	[DMSO] 0.89 (d, 6H); 1.40 (q, 2H); 1.62 (m, 1H); 3.30 (m, 2H); 8.71 (s, 1H); 8.73 (t, br, 1H); 13.4 (br, 1H)
1809	[DMSO] 3.93 (m, 2H); 5.18 (dd, 2H); 5.90 (m, 1H); 8.71 (s, 1H); 8.89 (t, br, 1H); 13.4 (br, 1H)
1810	[DMSO] 1.72 (s, 3H); 3.87 (d, 2H); 4.85 (d, 2H); 8.71 (s, 1H); 8.87 (t, br, 1H); 13.3 (br, 1H)
1811	[DMSO] 3.18 (m, 1H); 4.10 (m, 2H); 8.69 (s, 1H); 9.01 (t, br, 1H); 13.4 (br, 1H)
1813	[DMSO] 0.87 (t, 3H); 1.14 (d, 3H); 1.50 (m, 2H); 3.90 (m, 1H); 8.52 (d, br, 1H); 8.72 (s, 1H); 13.4 (br, 1H)
1815	[DMSO] 0.89 (t, 3H); 1.15 (d, 3H); 1.30 (m, 2H); 1.47 (m, 2H); 4.00 (m, 1H); 8.54 (br, 1H); 8.72 (s, 1H); 13.4 (br, 1H)
1816	[CDCl3] 0.89 (t, 3H); 1.20 (d, 3H); 1.27-1.37 (m, 6H); 1.51 (m, 2H); 4.16 (m, 1H); 8.75 (br, 1H); 8.90 (s, 1H); 12.1 (br, 1H)
1817	[CDCl3] 0.91 (m, 6H); 1.20 (d, 3H); 1.32 (m, 1H); 1.45 (m, 1H); 1.65 (m, 1H); 4.25 (m, 1H); 8.66 (br, 1H); 8.90 (s, 1H); 11.9 (br, 1H)
1818	[CDCl3] 0.94 (s, 9H); 1.14 (d, 3H); 4.07 (m, 1H); 8.85 (br, 1H); 8.90 (s, 1H)
1819	[CDCl3] 0.95 (m, 6H); 1.18 (d, 3H); 1.79 (m, 1H); 4.04 (m, 1H); 8.75 (br, 1H); 8.89 (s, 1H)
1820	[CDCl3] 0.93 (t, 6H); 1.48 (m, 2H); 1.64 (m, 2H); 3.98 (m, 1H); 8.63 (br, 1H); 8.90 (s, 1H); 11.6 (br, 1H)
1821	[CDCl3] 3.40 (s, 6H); 3.60 (t, 2H); 4.49 (t, 1H); 8.85 (s, br, 2H); 11.4 (br, 1H)
1823	[CDCl3] 3.63 (m, 2H); 3.83 (m, 2H); 8.86 (s, 1H); 9.17 (br, 1H)
1824	[CDCl3] 3.38 (s, 3H); 3.55 (m, 2H); 3.65 (m, 2H); 8.82 (s, 1H); 8.84 (br, 1H); 11.4 (br, 1H)
1826	[CDCl3] 1.25 (d, 3H); 3.39 (s, 3H); 3.43 (m, 2H); 4.38 (m, 1H); 8.67 (br, 1H); 8.82 (s, 1H); 11.5 (br, 1H)
1827	[CDCl3] 1.89 (m, 2H); 3.40 (s, 3H); 3.55 (m, 4H); 8.67 (s, 1H); 8.74 (br, 1H); 11.8 (br, 1H)
1828	[CDCl3] 3.78 (s, 3H); 4.24 (d, 2H); 8.89 (s, 1H); 9.30 (br, 1H)
1833	[DMSO] 2.85 (d, 3H); 8.69 (s, 1H); 8.71 (br, 1H); 13.5 (br, 1H)
1834	[DMSO] 1.12 (t, 3H); 3.30 (m, 2H); 8.70 (s, 1H); 8.75 (t, br, 1H); 13.5 (br, 1H)
1835	[DMSO] 0.89 (t, 3H); 1.52 (m, 2H); 3.25 (q, 2H); 8.70 (s, 1H); 8.75 (t, br, 1H); 13.5 (br, 1H)
1837	[DMSO] 0.59 (m, 2H); 0.76 (m, 2H); 2.86 (m, 1H); 8.66 (s, 1H); 8.76 (br, 1H); 13.3 (br)
1838	[CDCl3] 0.95 (t, 3H); 1.42 (m, 2H); 1.60 (m, 2H); 3.45 (m, 2H); 8.86 (s, 1H); 8.95 (br, 1H)
1839	[CDCl3] 1.81 (m, 2H); 2.00 (m, 2H); 2.42 (m, 2H); 4.54 (m, 1H); 8.84 (s, 1H); 9.17 (d, br, 1H); 12.2 (br, 1H)
1845	[CDCl3] 0.29 (m, 2H); 0.57 (m, 2H); 1.05 (m, 1H); 3.32 (t, 2H); 8.87 (s, 1H); 9.05 (br, 1H); 12.3 (br, 1H)
1847	[CDCl3] 1.00 (d, 6H); 1.90 (m, 1H); 3.30 (t, 2H); 8.85 (s, 1H); 9.00 (br, 1H)
1849	[CDCl3] 0.95 (d, 6H); 1.51 (q, 2H); 1.68 (m, 1H); 3.46 (m, 2H); 8.85 (s, 1H); 8.91 (br, 1H)
1851	[DMSO] 3.94 (m, 2H); 5.16 (dd, 2H); 5.90 (m, 1H); 8.70 (s, 1H); 8.85 (t, br, 1H); 13.4 (br, 1H)

TABLE 2-continued

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
1852	[CDCl3] 1.79 (s, 3H); 4.02 (m, 2H); 4.92 (m, 2H); 8.88 (s, 1H); 9.10 (t, br, 1H)
1853	[CDCl3] 2.26 (m, 1H); 4.22 (m, 2H); 8.86 (s, 1H); 9.25 (br, 1H)
1854	[DMSO] 0.87 (t, 3H); 1.13 (d, 3H); 1.50 (m, 2H); 3.91 (m, 1H); 8.55 (d, br, 1H); 8.70 (br, 1H); 13.5 (br, 1H)
1856	[DMSO] 0.89 (t, 3H); 1.15 (d, 3H); 1.30 (m, 2H); 1.49 (m, 2H); 4.01 (m, 1H); 8.51 (d, br, 1H); 8.71 (s, 1H); 13.6 (br, 1H)
1857	[CDCl3] 0.87 (t, 3H); 1.22 (8, 3H); 1.25-1.35 (m, 6H); 1.53 (m, 2H); 4.14 (m, 1H); 8.81 (d, br, 1H); 8.88 (s, 1H)
1858	[CDCl3] 0.92 (m, 6H); 1.22 (d, 3H); 1.33 (m, 1H); 1.48 (m, 1H); 1.65 (m, 1H); 4.25 (m, 1H); 8.84 (br, 1H); 8.88 (s, 1H); 12.3 (br, 1H)
1860	[CDCl3] 0.95 (m, 6H); 1.18 (d, 3H); 1.81 (m, 1H); 4.05 (m, 1H); 8.90 (s, 1H); 9.01 (d, br, 1H)
1861	[DMSO] 0.88 (t, 6H); 1.45 (m, 2H); 1.55 (m, 2H); 3.79 (m, 1H); 8.40 (d, br, 1H); 8.70 (s, 1H); 13.5 (br, 1H)
1867	[DMSO] 3.29 (s, 3H); 3.47 (m, 4H); 8.73 (s, 1H); 8.79 (br, 1H); 13.6 (br, 1H)
1869	[CDCl3] 1.28 (d, 3H); 3.39 (s, 3H); 3.45 (m, 2H); 4.35 (m, 1H); 8.81 (s, 1H); 8.86 (br, 1H); 12.0 (br, 1H)
1870	[CDCl3] 1.90 (m, 2H); 3.41 (s, 3H); 3.56 (m, 4H); 8.62 (s, 1H); 8.76 (br, 1H); 11.9 (br, 1H)
1876	[DMSO] 8.18 (br, 1H); 8.35 (br, 1H); 8.79 (s, 1H); 13.7 (br, 1H)
1877	[DMSO] 2.83 (d, 3H); 8.70 (br, 2H); 13.5 (br, 1H)
1878	[DMSO] 1.12 (t, 3H); 3.32 (m, 2H); 8.71 (s, 1H); 8.76 (t, br, 1H); 13.4 (br, 1H)
1879	[DMSO] 0.90 (t, 3H); 1.51 (m, 2H); 3.25 (q, 2H); 8.70 (s, 1H); 8.78 (t, br, 1H); 13.5 (br, 1H)
1880	[DMSO] 1.18 (d, 6H); 4.07 (m, 2H); 8.57 (d, br, 1H); 8.72 (s, 1H); 13.4 (br, 1H)
1881	[DMSO] 0.58 (m, 2H); 0.74 (m, 2H); 2.85 (m, 1H); 8.66 (s, 1H); 8.74 (br, 1H); 13.4 (br, 1H)
1882	[DMSO] 0.89 (t, 3H); 1.31 (m, 2H); 1.50 (m, 2H); 3.30 (m, 2H); 8.70 (s, 1H); 8.75 (br, 1H)
1883	[DMSO] 1.69 (m, 2H); 2.02 (m, 2H); 2.25 (m, 2H); 4.39 (m, 1H); 8.70 (s, 1H); 8.95 (br, 1H)
1884	[CDCl3] 1.47 (s, 9H); 8.87 (s, 1H); 9.02 (br, 1H); 12.2 (br, 1H)
1885	[CDCl3] 3.12 (s, 6H); 8.16 (s, 1H)
1886	[DMSO] 0.23 (m, 2H); 0.45 (m, 2H); 1.02 (m, 1H); 3.19 (t, 2H); 8.72 (s, 1H); 8.83 (br, 1H); 13.4 (br, 1H)
1887	[DMSO] 0.90 (s, 9H); 3.14 (d, 2H); 8.72 (br, 1H); 8.67 (s, 1H); 13.4 (br, 1H)
1888	[DMSO] 0.90 (d, 6H); 1.84 (m, 1H); 3.12 (t, 2H); 8.68 (s, 1H); 8.73 (t, br, 1H); 13.4 (br, 1H)
1890	[DMSO] 0.90 (d, 6H); 1.41 (m, 2H); 1.60 (m, 1H); 3.30 (m, 2H); 8.69 (s, 1H); 8.72 (t, br, 1H); 13.5 (br, 1H)
1892	[DMSO] 3.94 (m, 2H); 5.15 (dd, 2H); 5.89 (m, 1H); 8.70 (s, 1H); 8.85 (t, br, 1H)
1894	[DMSO] 1.70 (s, 3H); 3.86 (d, 2H); 4.84 (d, 2H); 8.68 (s, 1H); 8.95 (br, 1H); 13.4 (br, 1H)
1895	[DMSO] 3.10 (t, 1H); 4.05 (m, 2H); 8.25 (br, 1H); 8.30 (s, 1H); 11.5 (br, 1H)
1897	[CDCl3] 0.95 (t, 3H); 1.24 (d, 3H); 1.60 (m, 2H); 4.10 (m, 1H); 8.87 (br, 2H)
1899	[CDCl3] 0.92 (t, 3H); 1.23 (d, 3H); 1.40 (m, 2H); 1.52 (m, 2H); 4.17 (m, 1H); 8.88 (s, 1H); 8.91 (br, 1H)
1900	[DMSO] 0.86 (t, 3H); 1.15 (d, 3H); 1.25 (m, 6H); 1.48 (m, 2H); 4.00 (m, 1H); 8.53 (d, br, 1H); 8.71 (s, 1H); 13.4 (br, 1H)
1903	[DMSO] 0.89 (d, 6H); 1.13 (d, 3H); 1.27 (m, 1H); 1.48 (m, 1H); 1.62 (m, 1H); 4.09 (m, 1H); 8.50 (d, br, 1H); 8.71 (s, 1H); 13.5 (br, 1H)
1904	[DMSO] 0.81 (s, 9H); 1.07 (d, 3H); 3.90 (m, 1H); 8.43 (d, br, 1H); 8.67 (s, 1H); 13.4 (br, 1H)
1905	[DMSO] 0.88 (d, 6H); 1.10 (d, 3H); 1.75 (m, 1H); 1.48 (m, 1H); 3.85 (m, 1H); 8.49 (d, br, 1H); 8.70 (s, 1H); 13.5 (br, 1H)
1907	[DMSO] 0.87 (t, 6H); 1.43 (m, 2H); 1.55 (m, 2H); 3.78 (m, 1H); 8.55 (br, 1H); 8.67 (s, 1H); 13.5 (br, 1H)
1910	[CDCl3] 3.41 (s, 6H); 3.62 (t, 2H); 4.50 (t, 1H); 8.82 (s, 1H); 8.95 (br, 1H); 11.2 (br, 1H)
1912	[DMSO] 3.39 (m, 2H); 3.52 (m, 2H); 4.83 (br, 1H); 8.76 (s, 1H); 8.80 (t, br, 1H); 13.6 (br, 1H)
1913	[DMSO] 3.26 (s, 3H); 3.47 (m, 4H); 8.71 (s, 1H); 8.79 (br, 1H)
1916	[CDCl3] 1.27 (d, 3H); 3.39 (s, 3H); 3.44 (m, 2H); 4.38 (m, 1H); 8.83 (s, 1H); 8.95 (br, 1H); 12.1 (br, 1H)
1917	[DMSO] 1.75 (m, 2H); 3.24 (s, 3H); 3.39 (m, 4H); 8.70 (s, 1H); 8.81 (br, 1H); 13.4 (br, 1H)
1918	[DMSO] 3.66 (s, 3H); 4.12 (d, 2H); 8.71 (s, 1H); 9.02 (t, br, 1H), 13.5 (br, 1H)
1923	[DMSO] 2.81 (d, 3H); 8.72 (s, 1H); 8.77 (br, 1H); 13.4 (br)
1924	[DMSO] 1.14 (t, 3H); 3.35 (m, 2H); 8.74 (s, 1H); 8.82 (t, br, 1H); 13.4 (br)
1925	[DMSO] 0.89 (t, 3H); 1.53 (m, 2H); 3.28 (q, 2H); 8.73 (s, 1H); 8.80 (t, br, 1H)
1926	[DMSO] 1.18 (d, 6H); 4.10 (m, 1H); 8.63 (d, br, 1H); 8.75 (s, 1H); 13.4 (br, 1H)
1927	[DMSO] 0.60 (m, 2H); 0.75 (m, 2H); 2.87 (m, 1H); 8.69 (s, 1H); 8.80 (br, 1H)
1928	[DMSO] 0.89 (t, 3H); 1.34 (m, 2H); 1.51 (m, 2H); 3.30 (m, 2H); 8.72 (s, 1H); 8.79 (br, 1H)
1929	[DMSO] 1.72 (m, 2H); 2.05 (m, 2H); 2.27 (m, 2H); 4.38 (m, 1H); 8.73 (s, 1H); 9.00 (d, br, 1H); 13.3 (br)
1930	[DMSO] 1.37 (s, 9H); 8.30 (br, 1H); 8.66 (s, 1H); 13.4 (br)
1931	[DMSO] 2.80 (s, 3H); 2.96 (s, 3H); 8.27 (s, 1H); 12.4 (br, 1H)
1932	[DMSO] 1.01 (t, 3H); 1.11 (t, 3H); 3.10 (q, 2H); 3.42 (q, 2H); 8.25 (s, 1H); 12.3 (br, 1H)
1933	[DMSO] 0.26 (m, 2H); 0.47 (m, 2H); 1.04 (m, 1H); 3.20 (m, 2H); 8.77 (s, 1H); 8.87 (t, br, 1H); 13.5 (br, 1H)
1934	[DMSO] 0.90 (s, 9H); 3.13 (d, 2H); 8.62 (t, br, 1H); 8.70 (s, 1H); 13.3 (br, 1H)
1935	[DMSO] 0.90 (d, 6H); 1.85 (m, 1H); 3.13 (m, 2H); 8.71 (s, 1H); 8.75 (t, br, 1H); 13.4 (br, 1H)
1937	[CDCl3] 0.94 (d, 6H); 1.49 (q, 2H); 1.66 (m, 1H); 3.46 (m, 2H); 8.75 (br, 1H); 8.85 (s, 1H); 11.5 (br)
1939	[DMSO] 3.93 (m, 2H); 5.19 (dd, 2H); 5.89 (m, 1H); 8.72 (s, 1H); 8.90 (t, br, 1H); 13.3 (br, 1H)
1941	[DMSO] 1.72 (s, 3H); 3.87 (d, 2H); 4.87 (d, 2H); 8.73 (s, 1H); 8.89 (t, br, 1H); 13.3 (br)
1942	[DMSO] 3.18 (m, 1H); 4.10 (m, 2H); 8.70 (s, 1H); 9.04 (t, br, 1H); 13.3 (br, 1H)

TABLE 2-continued

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
1944	[DMSO] 0.89 (t, 3H); 1.14 (d, 3H); 1.51 (m, 2H); 3.91 (m, 1H); 8.55 (d, br, 1H); 8.75 (s, 1H); 13.4 (br, 1H)
1946	[DMSO] 0.89 (t, 3H); 1.15 (d, 3H); 1.31 (m, 2H); 1.47 (m, 2H); 4.01 (m, 1H); 8.56 (br, 1H); 8.74 (s, 1H); 13.4 (br, 1H)
1947	[DMSO] 0.85 (t, 3H); 1.15 (d, 3H); 1.20-1.35 (m, 6H); 1.49 (m, 2H); 4.00 (m, 1H); 8.58 (d, br, 1H); 8.74 (s, 1H); 13.4 (br, 1H)
1948	[DMSO] 0.88 (d, 6H); 1.15 (d, 3H); 1.27 (m, 1H); 1.48 (m, 1H); 1.61 (m, 1H); 4.10 (m, 1H); 8.56 (d, br, 1H); 8.74 (s, 1H); 13.5 (br, 1H)
1949	[CDCl3] 0.94 (s, 1H); 1.15 (d, 3H); 4.09 (m, 1H); 8.89 (br, 1H); 8.91 (s, 1H)
1950	[CDCl3] 0.94 (m, 6H); 1.17 (d, 3H); 1.80 (m, 1H); 4.05 (m, 1H); 8.88 (br, 1H); 8.92 (s, 1H)
1951	[CDCl3] 0.92 (t, 6H); 1.49 (m, 2H); 1.65 (m, 2H); 3.99 (m, 1H); 8.78 (br, 1H); 8.92 (s, 1H)
1952	[CDCl3] 3.41 (s, 6H); 3.61 (t, 2H); 4.50 (t, 1H); 8.84 (s, br, 2H); 11.4 (br, 1H)
1954	[DMSO] 3.39 (m, 2H); 3.52 (m, 2H); 4.80 (br, 1H); 8.79 (s, 1H); 8.82 (t, br, 1H); 13.5 (br, 1H)
1955	[CDCl3] 3.38 (s, 3H); 3.55 (m, 2H); 3.66 (m, 2H); 8.78 (s, br, 1H); 8.82 (s, 1H); 11.5 (br)
1957	[CDCl3] 1.27 (d, 3H); 3.38 (s, 3H); 3.42 (m, 2H); 4.38 (m, 1H); 8.75 (br, 1H); 8.84 (s, 1H); 12.3 (br, 1H)
1958	[CDCl3] 1.89 (m, 2H); 3.41 (s, 3H); 3.56 (m, 4H); 8.61 (s, 1H); 8.68 (br, 1H); 11.8 (br, 1H)
1959	[DMSO] 3.67 (s, 3H); 4.12 (d, 2H); 8.73 (s, 1H); 9.04 (t, br, 1H); 13.5 (br, 1H)
1964	[DMSO] 8.25 (br, 1H); 8.37 (br, 1H); 8.47 (s, 1H); 13.7 (br, 1H)
1965	[DMSO] 2.82 (d, 3H); 8.37 (s, 1H); 8.72 (d, br, 1H); 13.5 (br, 1H)
1966	[DMSO] 1.13 (t, 3H); 3.34 (m, 2H); 8.39 (s, 1H); 8.76 (t, br, 1H); 13.5 (br, 1H)
1967	[DMSO] 0.90 (t, 3H); 1.53 (m, 2H); 3.26 (q, 2H); 8.39 (s, 1H); 8.75 (t, br, 1H); 13.5 (br, 1H)
1968	[DMSO] 1.18 (d, 6H); 4.09 (m, 1H); 8.41 (s, 1H); 8.58 (d, br, 1H); 13.5 (br, 1H)
1969	[DMSO] 0.59 (m, 2H); 0.75 (m, 2H); 2.86 (m, 1H); 8.34 (s, 1H); 8.73 (d, br, 1H); 13.4 (br, 1H)
1970	[DMSO] 0.89 (t, 3H); 1.33 (m, 2H); 1.51 (m, 2H); 3.31 (m, 2H); 8.39 (s, 1H); 8.73 (t, br, 1H); 13.5 (br, 1H)
1971	[DMSO] 1.70 (m, 2H); 2.04 (m, 2H); 2.25 (m, 2H); 4.38 (m, 1H); 8.39 (s, 1H); 8.92 (d, br, 1H); 13.4 (br, 1H)
2006	[DMSO] 8.25 (br, 1H); 8.35 (br, 1H); 8.61 (s, 1H); 13.7 (br, 1H)
2007	[DMSO] 2.82 (d, 3H); 8.51 (s, 1H); 8.74 (d, br, 1H); 13.5 (br, 1H)
2008	[DMSO] 1.13 (t, 3H); 3.33 (m, 2H); 8.53 (s, 1H); 8.78 (t, br, 1H); 13.5 (br, 1H)
2009	[DMSO] 0.89 (t, 3H); 1.53 (m, 2H); 3.26 (q, 2H); 8.51 (s, 1H); 8.76 (t, br, 1H); 13.5 (br, 1H)
2010	[DMSO] 1.18 (d, 6H); 4.07 (m, 1H); 8.53 (s, 1H); 8.61 (d, br, 1H); 13.5 (br, 1H)
2011	[DMSO] 0.58 (m, 2H); 0.74 (m, 2H); 2.86 (m, 1H); 8.48 (s, 1H); 8.77 (d, br, 1H); 13.4 (br, 1H)
2012	[DMSO] 0.90 (t, 3H); 1.33 (m, 2H); 1.51 (m, 2H); 3.30 (m, 2H); 8.52 (s, 1H); 8.77 (t, br, 1H); 13.5 (br, 1H)
2013	[DMSO] 1.72 (m, 2H); 2.05 (m, 2H); 2.25 (m, 2H); 4.39 (m, 1H); 8.51 (s, 1H); 8.95 (d, br, 1H); 13.4 (br, 1H)
2014	[DMSO] 1.37 (s, 9H); 8.31 (br, 1H); 8.45 (s, 1H); 13.4 (br, 1H)
2015	[DMSO] 2.82 (s, 3H); 2.95 (s, 3H); 8.12 (s, 1H); 12.5 (br, 1H)
2017	[DMSO] 0.26 (m, 2H); 0.47 (m, 2H); 1.04 (m, 1H); 3.30 (m, 2H); 8.56 (s, 1H); 8.86 (t, br, 1H); 13.5 (br, 1H)
2018	[DMSO] 0.91 (s, 9H); 3.13 (d, 2H); 8.47 (s, 1H); 8.63 (t, br, 1H); 13.5 (br, 1H)
2019	[DMSO] 0.90 (d, 6H); 1.83 (m, 1H); 3.13 (m, 2H); 8.50 (s, 1H); 8.73 (t, br, 1H); 13.4 (br, 1H)
2021	[DMSO] 0.89 (d, 6H); 1.42 (q, 2H); 1.62 (m, 1H); 3.31 (m, 2H); 8.51 (s, 1H); 8.75 (t, br, 1H); 13.5 (br, 1H)
2023	[DMSO] 3.94 (m, 2H); 5.18 (dd, 2H); 5.89 (m, 1H); 8.52 (s, 1H); 8.88 (t, br, 1H); 13.4 (br, 1H)
2025	[DMSO] 1.72 (s, 3H); 3.86 (d, 2H); 4.85 (d, 2H); 8.50 (s, 1H); 8.87 (t, br, 1H); 13.4 (br, 1H)
2026	[DMSO] 3.18 (m, 1H); 4.10 (m, 2H); 8.48 (s, 1H); 9.02 (t, br, 1H); 13.3 (br, 1H)
2030	[CDCl3] 0.93 (t, 3H); 1.23 (d, 3H); 1.40 (m, 2H); 1.52 (m, 2H); 4.21 (m, 1H); 8.74 (s, 1H); 8.97 (d, br, 1H); 12.9 (br, 1H)
2031	[DMSO] 0.85 (t, 3H); 1.15 (d, 3H); 1.20-1.35 (m, 6H); 1.48 (m, 2H); 3.99 (m, 1H); 8.52 (s, 1H); 8.54 (d, br, 1H); 13.5 (br, 1H)
2032	[DMSO] 0.88 (d, 6H); 1.14 (d, 3H); 1.27 (m, 1H); 1.48 (m, 1H); 1.62 (m, 1H); 4.10 (m, 1H); 8.51 (s, 1H); 8.53 (d, br, 1H); 13.5 (br, 1H)
2035	[DMSO] 0.86 (t, 6H); 1.45 (m, 2H); 1.55 (m, 2H); 3.78 (m, 1H); 8.82 (d, br, 1H); 8.51 (s, 1H); 13.5 (br, 1H)
2036	[CDCl3] 3.41 (s, 6H); 3.61 (t, 2H); 4.50 (t, 1H); 8.67 (s, 1H); 9.00 (br, 1H); 11.7 (br, 1H)
2038	[DMSO] 3.35 (m, 2H); 3.53 (m, 2H); 4.81 (br, 1H); 8.56 (s, 1H); 8.80 (t, br, 1H); 13.6 (br, 1H)
2039	[CDCl3] 3.38 (s, 3H); 3.56 (m, 2H); 3.65 (m, 2H); 8.65 (s, 1H); 9.01 (s, 1H); 11.8 (br, 1H)
2041	[DMSO] 1.15 (d, 3H); 3.30 (s, 3H); 3.40 (m, 2H); 4.18 (m, 1H); 8.52 (s, 1H); 8.64 (d, br, 1H); 13.4 (br, 1H)
2048	[DMSO] 8.20 (br, 1H); 8.37 (br, 1H); 8.81 (s, 1H); 13.7 (br, 1H)
2090	[DMSO] 7.45 (d, 1H); 8.14 (br, 1H); 8.42 (br, 1H); 8.48 (d, 1H); 13.7 (br, 1H)
2091	[DMSO] 2.84 (d, 3H); 7.42 (d, 1H); 8.41 (d, 1H); 8.79 (br, 1H); 13.4 (br, 1H)
2092	[DMSO] 1.12 (t, 3H); 3.32 (m, 2H); 7.42 (d, 1H); 8.42 (d, 1H); 8.83 (br, 1H); 13.4 (br, 1H)
2093	[DMSO] 0.89 (t, 3H); 1.54 (m, 2H); 3.27 (q, 2H); 7.42 (d, 1H); 8.41 (d, 1H); 8.82 (br, 1H); 13.4 (br, 1H)
2094	[DMSO] 1.18 (d, 6H); 4.11 (m, 1H); 7.41 (d, 1H); 8.41 (d, 1H); 8.63 (br, 1H); 13.4 (br, 1H)
2095	[CDCl3] 0.61 (m, 2H); 0.88 (m, 2H); 3.00 (m, 1H); 6.89 (d, 1H); 8.68 (d, 1H); 9.35 (br, 1H); 12.5 (br, 1H)
2096	[DMSO] 0.89 (t, 3H); 1.33 (m, 2H); 1.52 (m, 2H); 3.32 (m, 2H); 7.42 (d, 1H); 8.41 (d, 1H); 8.81 (br, 1H); 13.3 (br, 1H)

TABLE 2-continued

NMR data of compounds from Table 1

Ex. No.	1H-NMR data
2097	[DMSO] 1.72 (m, 2H); 2.05 (m, 2H); 2.46 (m, 2H); 4.41 (m, 1H); 7.43 (d, 1H); 8.39 (d, 1H); 8.96 (br, 1H); 13.3 (br, 1H)
2101	[DMSO] 0.26 (m, 2H), 0.47 (m, 2H); 1.06 (m, 1H); 3.22 (m, 2H); 7.45 (d, 1H); 8.45 (d, 1H); 8.91 (br, 1H); 13.4 (br, 1H)
2102	[DMSO] 0.92 (s, 9H); 3.15 (d, 2H); 7.40 (d, 1H); 8.41 (d, 1H); 8.75 (br, 1H); 13.3 (br, 1H)
2103	[DMSO] 0.90 (d, 6H); 1.83 (m, 1H); 3.14 (t, 2H); 7.40 (d, 1H); 8.40 (d, 1H); 8.81 (t, br, 1H); 13.3 (br, 1H)
2105	[DMSO] 0.90 (d, 6H); 1.42 (m, 2H); 1.62 (m, 1H); 3.33 (m, 2H); 7.41 (d, 1H); 8.40 (d, 1H); 8.80 (br, 1H); 13.3 (br, 1H)
2107	[DMSO] 3.95 (t, 2H); 5.17 (dd, 2H); 5.90 (m, 1H); 7.41 (d, 1H); 8.41 (d, 1H); 8.93 (br, 1H); 13.3 (br, 1H)
2109	[DMSO] 1.72 (s, 3H); 3.88 (d, 2H); 4.85 (d, 2H); 7.42 (d 1H); 8.42 (d, 1H); 8.94 (br, 1H); 13.3 (br, 1H)
2110	[DMSO] 3.17 (m, 1H); 4.11 (m, 2H); 7.41 (d, 1H); 8.40 (d, 1H); 9.06 (br, 1H), 13.3 (br, 1H)
2112	[DMSO] 0.89 (t, 3H); 1.15 (d, 3H); 1.53 (m, 2H); 3.95 (m, 1H); 7.42 (d, 1H); 8.42 (d, 1H); 8.60 (br, 1H); 13.4 (br, 1H)
2114	[DMSO] 0.88 (t, 3H); 1.15 (d, 3H); 1.32 (m, 2H); 1.48 (m, 2H); 4.04 (m, 1H); 7.42 (d, 1H); 8.41 (d, 1H); 8.59 (br, 1H); 13.4 (br, 1H)
2115	[DMSO] 0.85 (t, 3H); 1.16 (d, 3H); 1.20-1.35 (m, 6H); 1.50 (m, 2H); 4.02 (m, 1H); 7.42 (d, 1H); 8.44 (d, 1H); 8.62 (d, br, 1H), 13.4 (br, 1H)
2116	[DMSO] 0.88 (d, 6H); 1.14 (d, 3H); 1.25 (m, 1H); 1.48 (m, 1H); 1.63 (m, 1H); 4.21 (m, 1H); 6.92 (d, 1H); 8.42 (d, 1H); 8.59 (d, br, 1H), 13.4 (br, 1H)
2122	[DMSO] 3.40 (m, 2H); 3.52 (m, 2H); 4.82 (br, 1H); 7.44 (d, 1H); 8.46 (d, 1H); 8.88 (br, 1H); 13.4 (br, 1H)
2133	[DMSO] 2.83 (d, 3H); 8.58 (s, 1H); 8.82 (d, br, 1H); 13.4 (br, 1H)
2134	[DMSO] 1.14 (t, 3H); 3.34 (m, 2H); 8.60 (s, 1H); 8.86 (t, br, 1H); 13.5 (br, 1H)
2135	[DMSO] 0.89 (t, 3H); 1.54 (m, 2H); 3.26 (q, 2H); 8.59 (s, 1H); 8.85 (t, br, 1H); 13.5 (br, 1H)
2137	[DMSO] 0.60 (m, 2H); 0.75 (m, 2H); 2.88 (m, 1H); 8.55 (s, 1H); 8.85 (d, br, 1H); 13.4 (br, 1H)
2138	[DMSO] 0.90 (t, 3H); 1.33 (m, 2H); 1.51 (m, 2H); 3.31 (m, 2H); 8.59 (s, 1H); 8.84 (t, br, 1H); 13.4 (br, 1H)
2139	[DMSO] 1.71 (m, 2H); 2.05 (m, 2H); 2.25 (m, 2H); 4.40 (m, 1H); 8.62 (s, 1H); 9.04 (d, br, 1H); 13.4 (br, 1H)
2143	[DMSO] 0.26 (m, 2H); 0.47 (m, 2H); 1.05 (m, 1H); 3.20 (m, 2H); 8.63 (s, 1H); 8.94 (t, br, 1H); 13.4 (br, 1H)
2144	[DMSO] 0.91 (s, 9H); 3.15 (d, 2H); 8.55 (s, 1H); 8.66 (t, br, 1H); 13.3 (br, 1H)

3. Biological Examples

3.1 Scoring of the Damage

The damage to the plants is scored visually using a scale of 0-100%, in comparison to control plants:

0%=no noticeable effect compared to the untreated plant

100%=the treated plants dies.

3.2 Post-Emergence Herbicide Action and Safener Action

Seeds or rhizome pieces of monocotyledonous and dicotyledonous harmful plants and crop plants are placed in sandy loam soil in plastic pots, covered with soil and cultivated in the greenhouse under good growth conditions. Alternatively, harmful plants encountered in paddy rice cultivation are cultivated in pots in which the surface of the soil is covered by up to 2 cm of water. Three weeks after sowing, the test plants are treated at the three-leaf stage. The herbicide/safener active compound combinations according to the invention, formulated as emulsion concentrates, and in parallel tests the individual active compounds formulated in a corresponding manner, are sprayed at various dosages at a water application rate of 3001 l/ha (converted) onto the green parts of the plants, and, after the test plants were left to stand in the greenhouse for about 2 to 3 weeks under optimum growth conditions, the effect of the preparations is scored visually in comparison to untreated controls. In the case of rice or harmful plants encountered in the cultivation of rice, the active compounds are also added directly to the irrigation water (application analogously to the so-called granule application) or sprayed onto the plants and into the irrigation water.

The tests show that the safeners according to the invention in combination with herbicides, in a herbicides:safener ratio of from 2:1 to 1:20, considerably reduce the damage caused by the herbicide to crop plants such as corn, rice, wheat or barley or other cereals or dicotyledonous crop plants such as soybeans or oilseed rape compared to the application of the individual herbicides without safener, such that from 30% up to 100% less damage to the crop plant is observed. At the same time, the action of the herbicide against economically important harmful plants is not, or not essentially, adversely affected, so that good herbicidal post-emergence action against a broad spectrum of weed grasses and broad-leaved weeds can be achieved.

In barley, for example, a good safener action for the herbicide mesosulfuron-methyl could be achieved using the compounds Nos. 1, 2, 3, 5, 7, 9, 10, 13, 14, 22, 25, 26, 30, 34, 36, 40, 57, 64, 66, 79, 100, 101, 102, 105, 114, 115, 116, 117, 119, 123, 124, 128, 130, 134, 136, 138, 140, 146, 148, 153, 154, 155, 157, 163, 165, 168, 169, 171, 178, 193, 194, 214, 341, 342, 344, 345, 346, 382, 384, 392, 398, 405, 407, 455, 457, 489, 496, 498, 571, 909, 910, 911, 913, 943, 950, 960, 1023, 1026, 1029, 1030, 1201, 1481, 1487, 1598, 1599, 1600, 1636, 1907.

In corn, for example, a good safener action for the herbicide tembotrione could be achieved using the following compounds from Table 1: 4, 6, 9, 10, 14, 24, 32, 34, 36, 43, 64, 66, 71, 75, 79, 105, 114, 118, 140, 146, 148, 153, 169, 178, 210, 214, 345, 51, 95, 341, 456, 457, 489, 496, 498, 909, 911, 913, 943, 960, 1026, 1139, 1368, 1371, 1485, 1488, 1596, 1597, 1598, 1599, 1600, 1604, 1619, 1625, 1629, 1636, 1638, 1646, 1758.

In rice, for example, the following compounds from Table 1 achieved good safener action for fenoxaprop-P-ethyl and thiencarbazone or thiencarbazone-methyl:

1, 2, 3, 4, 9, 16, 20, 22, 34, 41, 47, 54, 57, 75, 76, 79, 80, 81, 101, 103, 105, 114, 115, 117, 118, 120, 127, 128, 130, 153, 154, 157, 162, 165, 169, 171, 178, 218, 271, 341, 342, 344, 345, 346, 350, 355, 392, 398, 405, 407, 456, 973, 1482, 1596, 1597, 1598, 1600, 1603, 1609, 1625, 1638, 1646, 1659.

3.3 Pre-Emergence Herbicide Action and Safener Action

Seeds or rhizome pieces of monocotyledonous and dicotyledonous weed plants and crop plants were placed in sandy loam soil in plastic pots and covered with soil. The herbicide/safener active compound combinations according to the invention, formulated as suspension emulsion concentrates, and in parallel tests the individual active compounds formulated in a corresponding manner, were then, at various dosages at a water application rate of 600 to 800 l/ha (converted), applied to the surface of the covering soil.

After the treatment, the pots were placed in the greenhouse and kept under good growth conditions for the weeds and the crop plants. Visual scoring of the plant damage or emergence damage was carried out after the test plants had emerged after a test period of 3 to 4 weeks, in comparison to untreated controls. The test results showed that the compounds according to the invention prevented or reduced herbicide damage to the crop plants without reducing, or reducing substantially, the herbicide action against the harmful plants.

For example, example Nos. 2, 19, 39, 72, 104, 122, 155, 193, 194, 217, 232, 271, 341, 380, 392, 1368, 1597, 1625, 1636 of Table 1 showed in the test in combination with the herbicide isoxaflutol a good safener action in corn. The herbicidal action of the herbicidally active compounds used was not adversely affected.

Accordingly, in many cases, the safeners, combined with herbicides, are suitable for the selective control of harmful plants in the pre-emergence treatment of crops of useful plants.

3.4 Seed Treatment

Seeds of crop plants were mixed in bottles with the safeners according to the invention, formulated as suspension or emulsion concentrates, and water, and the mixture was shaken well so that the seeds were coated evenly with the formulation of the safener in question. The seeds or the emerged plants were then tested with herbicides in the pre- or post-emergence method according to the tests of examples 3.3 and 3.2, respectively.

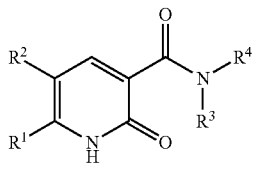
In the treatment of seed, too, the safeners showed good activity. The herbicidal action of the herbicidally active compounds used was not adversely affected.

Having thus described in detail various embodiments of the present invention, it is to be understood that the invention defined by the above paragraphs is not to be limited to particular details set forth in the above description as many apparent variations thereof are possible without departing from the spirit or scope of the present invention.

What is claimed is:

1. A compound of the formula (I) or a salt thereof,

(I)



wherein the identities of R^1, R^2, R^3, and R^4 for the compound of formula (I) are selected from the group consisting of (A), (B), and (C);

wherein in (A):

R^1 is a $(C_1$-$C_6)$-haloalkyl radical;

R^2 is hydrogen or halogen; and

the identities of R^3 and R^4 are selected from the group consisting of (i), (ii) (iii), and (iv);

where for (i):

R^3 is:

(a) hydrogen, $(C_1$-$C_{16})$-alkyl, $(C_2$-$C_{16})$-alkenyl, or $(C_2$-$C_{16})$-alkynyl;

where each of the 3 last mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, di[$(C_1$-$C_4)$-alkyl]amino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, and [$(C_1$-$C_4)$-haloalkoxy]-carbonyl; or

(b) $(C_3$-$C_6)$-cycloalkyl, $(C_4$-$C_6)$-cycloalkenyl, $(C_3$-$C_6)$-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring, or $(C_4$-$C_6)$-cycloalkenyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring;

where each of the 4 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, di[$(C_1$-$C_4)$-alkyl]-amino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, [$(C_1$-$C_4)$-haloalkoxy]-carbonyl, $(C_3$-$C_6)$-cycloalkyl, which is unsubstituted or substituted, phenyl, which is unsubstituted or substituted, and heterocyclyl, which is unsubstituted or substituted; and

R^4 is:

(a) $(C_1$-$C_{16})$-alkyl, $(C_2$-$C_{16})$-alkenyl, or $(C_2$-$C_{16})$-alkynyl;

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, di[$(C_1$-$C_4)$-alkyl]-amino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, and [$(C_1$-$C_4)$-haloalkoxy]-carbonyl; or

(b) $(C_3$-$C_6)$-cycloalkyl, $(C_4$-$C_6)$-cycloalkenyl, $(C_3$-$C_6)$-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring, or $(C_4$-$C_6)$-cycloalkenyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring;

where each of the 4 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, di[$(C_1$-$C_4)$-alkyl]-amino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, [$(C_1$-$C_4)$-haloalkoxy]-carbonyl, $(C_3$-$C_6)$-cycloalkyl, which is unsubstituted or substituted,

phenyl, which is unsubstituted or substituted, and heterocyclyl, which is unsubstituted or substituted; and

where for (ii):

R^3 is $(C_1$-$C_4)$-alkoxy, $(C_2$-$C_4)$-alkenyloxy, $(C_2$-$C_6)$-alkynyloxy, or $(C_2$-$C_4)$-haloalkoxy; and

R^4 is hydrogen or $(C_1$-$C_4)$-alkyl; or and

where for (iii) R^3 and R^4 together with the directly attached nitrogen atom are a four- to eight-membered heterocyclic ring which, in addition to the nitrogen atom, may also comprise further hetero ring atoms, and which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, cyano, nitro, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, and $(C_1$-$C_4)$-alkylthio; and

where for (iv) R^3 and R^4 together with the directly attached nitrogen atom are the group —N═CR^5—NR^6R^7 in which:

R^5 is hydrogen or $(C_1$-$C_6)$-alkyl, and

R^6, R^7 independently of one another are hydrogen or $(C_1$-$C_4)$-alkyl, or

R^6 and R^7 together with the directly attached nitrogen atom form a five- to seven-membered heterocyclic ring; and

wherein in (B):

R^1 is a $(C_1$-$C_6)$-haloalkyl radical;

R^2 is halogen;

R^3 is hydrogen; and

R^4 is hydrogen; and

wherein in (C):

R^1 is a radical of the formula CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CFClCF_3$, $CFHCF_3$, $CF(CF_3)_2$, $CH(CF_3)_2$, $CF_2CF_2CF_3$, or $C(CH_3)_2F$;

R^2 is hydrogen;

R^3 is hydrogen; and

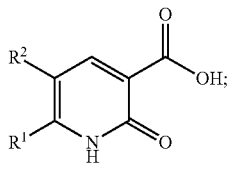
R^4 is hydrogen.

2. A process for preparing compounds of the general formula (I) or salts thereof as defined in claim **1**, which comprises:

(a) reacting a carboxylic acid of the general formula (II) with an amine of the formula (III) or a salt thereof to give the compound of the formula (I);

wherein the general formula (II) is:

(II)



where R^1 and R^2 are as defined for the compound of the formula (I) to be prepared;

wherein the formula (III) is:

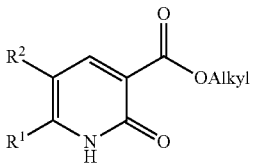
(III)

where R^3 and R^4 are as defined for the compound of the formula (I) to be prepared; or

(b) reacting a carboxylic ester of the general formula (IV) with an amine of the formula (III) or a salt thereof to give the compound of the formula (I);

wherein the general formula (IV) is:

(IV)



where R^1 and R^2 are as defined for the compound of the formula (I) to be prepared and "Alkyl" is an alkyl radical;

wherein the formula (III) is:

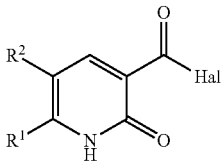
(III)

where R^3 and R^4 are as defined for the compound of the formula (I) to be prepared; or

(c) reacting a carbonyl halide or a carboxylic anhydride of the general formula (V) with an amine of the formula (III) or a salt thereof to give the compound of the formula (I);

wherein the general formula (V) is:

(V)



where R^1 and R^2 are as defined for the compound of the formula (I) to be prepared and Hal is a halogen atom or an acyloxy radical;

wherein the formula (III) is:

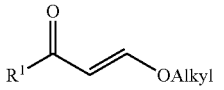
(III)

where R^3 and R^4 are as defined for the compound of the formula (I) to be prepared; or

(d) if R^3 and R^4 in the compound of the formula (I) to be prepared are each hydrogen, reacting a compound of the formula (VI) with malonamide to give the compound of the formula (I);

wherein the formula (VD is:

(VI)



where R^1 is as defined for the compound of the formula (I) to be prepared, and "Alkyl" is an alkyl radical.

3. A crop protection composition comprising:

one or more compounds of the formula (I) or salts thereof as defined in claim **1**; and

formulation auxiliaries.

4. A crop protection composition comprising:

one or more compounds of the formula (I) or salts thereof as defined in claim **1**; and

one or more agrochemicals and, optionally, formulation auxiliaries.

5. The compound as claimed in claim **1**;

wherein R^3 is:

(a) hydrogen, $(C_1$-$C_{10})$-alkyl, $(C_1$-$C_{10})$-alkenyl, or $(C_2$-$C_{10})$-alkynyl;

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, and [$(C_1$-$C_4)$-haloalkoxy]-carbonyl; or

(b) $(C_3$-$C_6)$-cycloalkyl, $(C_4$-$C_6)$-cycloalkenyl, $(C_3$-$C_6)$-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring, or $(C_4$-$C_6)$-cycloalkenyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring;

where each of the 4 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of:

halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, di[$(C_1$-$C_4)$-alkyl]-amino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, and [$(C_1$-$C_4)$-haloalkoxy]-carbonyl;

$(C_3$-$C_6)$-cycloalkyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, $(C_1$-$C_4)$-alkyl and $(C_1$-$C_4)$-haloalkyl;

phenyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy and $(C_1$-$C_4)$-alkylthio; and

heterocyclyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio and oxo; and

wherein R^4 is:

(a) $(C_1$-$C_{10})$-alkyl, $(C_2$-$C_{10})$-alkenyl, or $(C_2$-$C_{10})$-alkynyl;

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, di[$(C_1$-$C_4)$-alkyl]-amino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, and [$(C_1$-$C_4)$-haloalkoxy]-carbonyl; or

(b) $(C_3$-$C_6)$-cycloalkyl, $(C_4$-$C_6)$-cycloalkenyl, $(C_3$-$C_6)$-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring, or $(C_4$-$C_6)$-cycloalkenyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring;

where each of the 4 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of:

halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, di[$(C_1$-$C_4)$-alkyl]-amino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, and [$(C_1$-$C_4)$-haloalkoxy]-carbonyl;

$(C_3$-$C_6)$-cycloalkyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, $(C_1$-$C_4)$-alkyl and $(C_1$-$C_4)$-haloalkyl;

phenyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy and $(C_1$-$C_4)$-alkylthio; and

heterocyclyl, which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, $(C_1$-$C_4)$-alkyl, $(C_1$-$C_4)$-haloalkyl, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio and oxo.

6. The compound as claimed in claim **1**;

wherein R^3 is:

hydrogen, $(C_1$-$C_{10})$-alkyl, $(C_2$-$C_{10})$-alkenyl, or $(C_2$-$C_{10})$-alkynyl;

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, di[$(C_1$-$C_4)$-alkyl]-amino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, and [$(C_1$-$C_4)$-haloalkoxy]-carbonyl; or

$(C_3$-$C_6)$-cycloalkyl or $(C_3$-$C_6)$-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring;

where each of the 2 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of $(C_1$-$C_4)$-alkyl; and

wherein R^4 is:

$(C_1$-$C_{10})$-alkyl, $(C_2$-$C_{10})$-alkenyl, or $(C_2$-$C_{10})$-alkynyl;

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, $(C_1$-$C_4)$-alkylamino, di[$(C_1$-$C_4)$-alkyl]-amino, [$(C_1$-$C_4)$-alkoxy]-carbonyl, and [$(C_1$-$C_4)$-haloalkoxy]-carbonyl; or

$(C_3$-$C_6)$-cycloalkyl or $(C_3$-$C_6)$-cycloalkyl which is condensed at one side of the ring to a 4- to 6-membered saturated or unsaturated carbocyclic ring;

where each of the 2 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of $(C_1$-$C_4)$-alkyl.

7. The compound as claimed in claim **1**;

wherein R^3 is hydrogen, $(C_1$-$C_{10})$-alkyl, $(C_2$-$C_{10})$-alkenyl, or $(C_2$-$C_{10})$-alkynyl;

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of $(C_1$-$C_4)$-alkoxy, $(C_1$-$C_4)$-haloalkoxy, $(C_1$-$C_4)$-alkylthio, and [$(C_1$-$C_4)$-alkoxy]-carbonyl; and

wherein R^4 is $(C_1$-$C_{10})$-alkyl, $(C_2$-$C_{10})$-alkenyl, or $(C_2$-$C_{10})$-alkynyl;

where each of the 3 lastmentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of (C_1-C_4)-alkoxy, (C_1-C_4)-haloalkoxy, (C_1-C_4)-alkylthio, and [(C_1-C_4)-alkoxy]-carbonyl.

8. The compound as claimed in claim **1**;

wherein R^1 is CF_3, CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CF_2CF_2CF_3$, or $C(CH_3)_2F$; and

wherein R^2 is hydrogen or halogen.

9. The compound as claimed in claim **1**;

wherein R^1 is a (C_1-C_6)-haloalkyl radical;

wherein R^2 is halogen;

wherein R^3 is hydrogen; and

wherein R^4 is hydrogen.

10. The compound as claimed in claim **1**;

wherein R^1 is a radical of the formula CF_2Cl, CF_2H, CF_2CF_3, CF_2CF_2H, CF_2CF_2Cl, $CFClCF_3$, $CFHCF_3$, $CF(CF_3)_2$, $CH(CF_3)_2$, $CF_2CF_2CF_3$, or $C(CH_3)_2F$;

wherein R^2 is hydrogen;

wherein R^3 is hydrogen; and

wherein R^4 is hydrogen.

11. A method for protecting useful plants against phytotoxic side effects of agrochemicals, the method comprising:

applying an effective amount of one or more compounds as defined in claim **1** before, after, or simultaneously with the agrochemicals to the plants, parts of the plants, the plant seeds, or seed of the plants.

12. The method as claimed in claim **11**;

wherein one or more compounds of the formula (I) or salts thereof are used together with one or more agrochemicals which, applied on their own, cause damage to the useful plants, optionally in the presence of formulation auxiliaries.

13. The method as claimed in claim **11**;

wherein the application is by the post-emergence method.

14. The method as claimed in claim **11**;

wherein the application of the compound of the formula (I) or a salt thereof is by treating the plant seeds or seed of the plants.

15. The method as claimed in claim **11**;

wherein the application is by the pre-emergence method.

16. A method for the selective control of harmful plants in crops of useful plants, the method comprising:

applying an effective amount of one or more compounds of the formula (I) or salts thereof as defined in claim **1** before, after, or simultaneously with one or more herbicides to the plants, parts of plants, plant seeds, or seed of the plants.

17. The method as claimed in claim **16**, further comprising:

treating the seed of the plants with one or more compounds of the formula (I) or salts thereof and applying the herbicide after sowing by the pre-emergence method or by the post-emergence method.

* * * * *